

ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to preparers: This form and EAW Guidelines are available at the Environmental Quality Board's website at: <http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm>. The Environmental Assessment Worksheet provides information about a project that may have the potential for significant environmental effects. The EAW is prepared by the Responsible Governmental Unit or its agents to determine whether an Environmental Impact Statement should be prepared. The project proposer must supply any reasonably accessible data for — but should not complete — the final worksheet. The complete question as well as the answer must be included if the EAW is prepared electronically.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

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1. Project Title

Lilydale Regional Park Amended Master Plan

2. Proposer

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3. RGU

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4. Reason for EAW Preparation (check one)

EIS scoping Mandatory EAW Citizen petition RGU discretion Proposer volunteered

If EAW or EIS is mandatory give EQB rule category subpart number _____ and subpart name: _____

5. Project Location

County: Dakota and Ramsey, Minnesota

City/Township: St. Paul, Minnesota

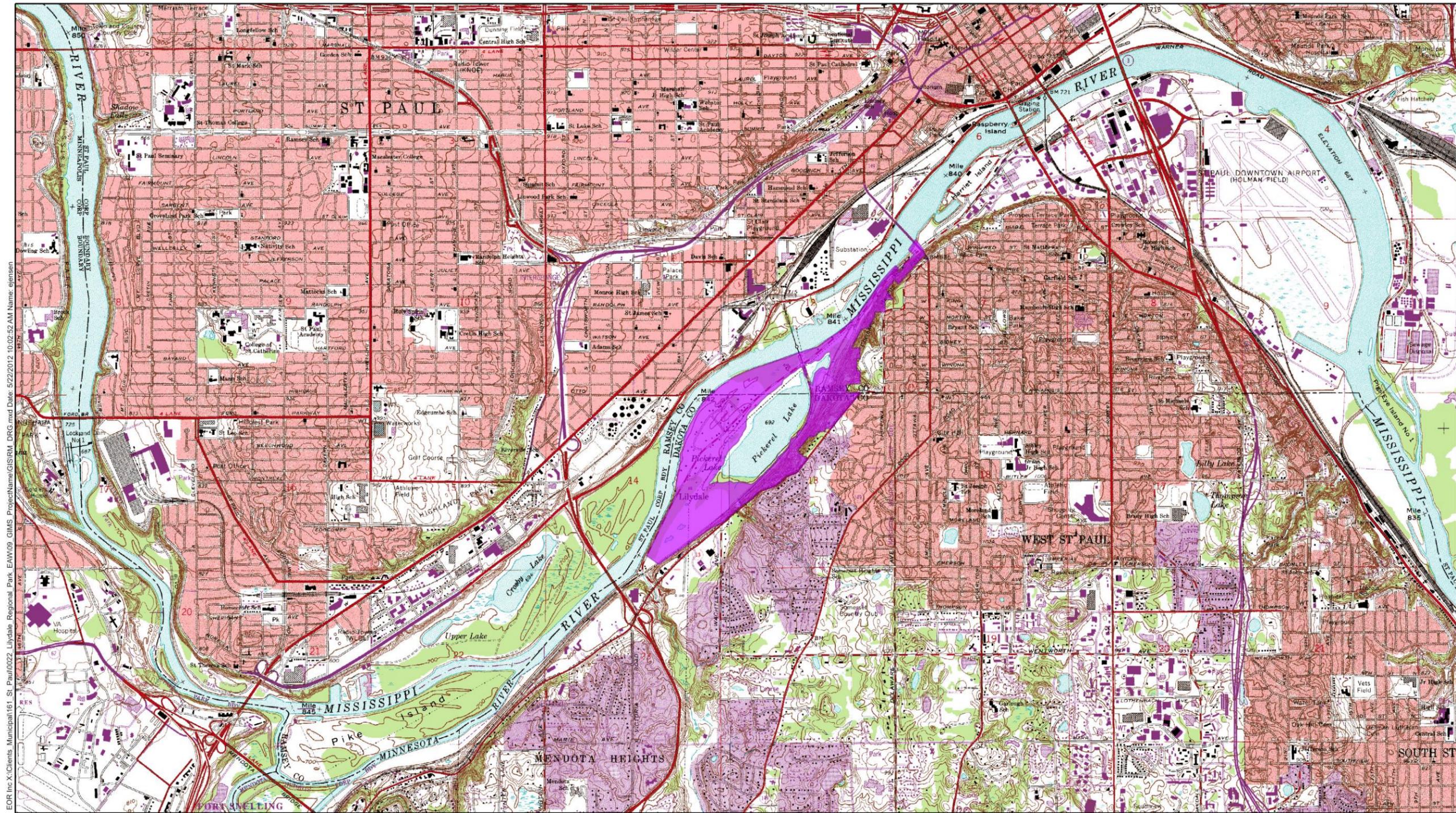
The legal description spans four sections as follows.

Township 28N Range 22. The south ½ of Section 14, southwest ¼ of Section 14, northwest ¼ and southwest ¼ of Section 12, and northeast ¼ of Section 13.

GPS Coordinates N 146636.3085 feet E 566858.1207 (this is a point at the center of the project)

Tax Parcel Number 122823330032

The project area is shown in the context of the counties on Figure 5.1 Ramsey and Dakota County Location, ecologically notable land cover and sensitive site features on Figure 5.2 Sensitive Resources, and detailed land cover types on Figure 5.3 Mississippi Floodplain Natural Areas and Revegetation Boundary.

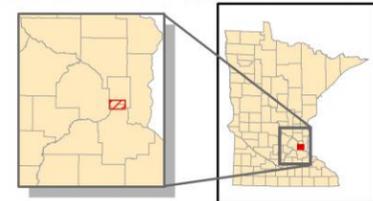


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Legend
 Park Boundary

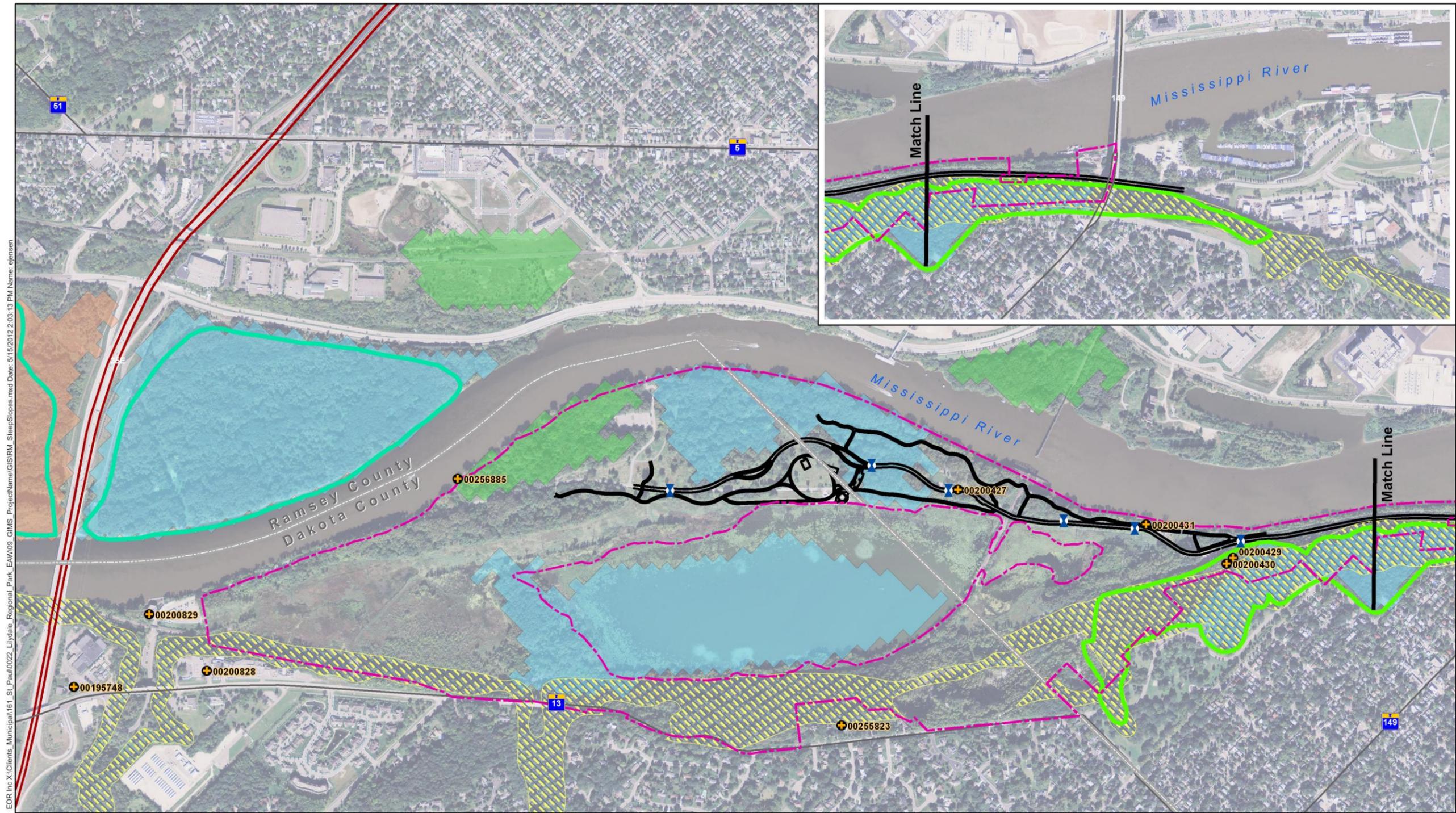
Data sources: USGS, MetCouncil



**Lilydale Regional Park EAW,
 St. Paul, MN**
 Ramsey and Dakota County Location
 Figure 5.1



Figure 5.1 Ramsey and Dakota County Location



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Legend

Park Boundary	Ramsey Co. - Doretton-Rock outcrop complex, 25 to 65% slopes	Central Region Regionally Significant Ecological Areas	Outstanding
Proposed Construction	Dakota Co. - Etter-Brodale complex, 25 to 60% slopes		High
County Line	County Well Index		Moderate
Animal Crossing Area			Below

MCBS Sites of Biodiversity

Data sources: Natural Resources Conservation Service, 2006; Mn DNR, FSA 2010 Orthophotography, MetCouncil, LHB



Lilydale Regional Park EAW, St. Paul, MN

Sensitive Resources
Figure 5.2



Figure 5.2 Sensitive Resources

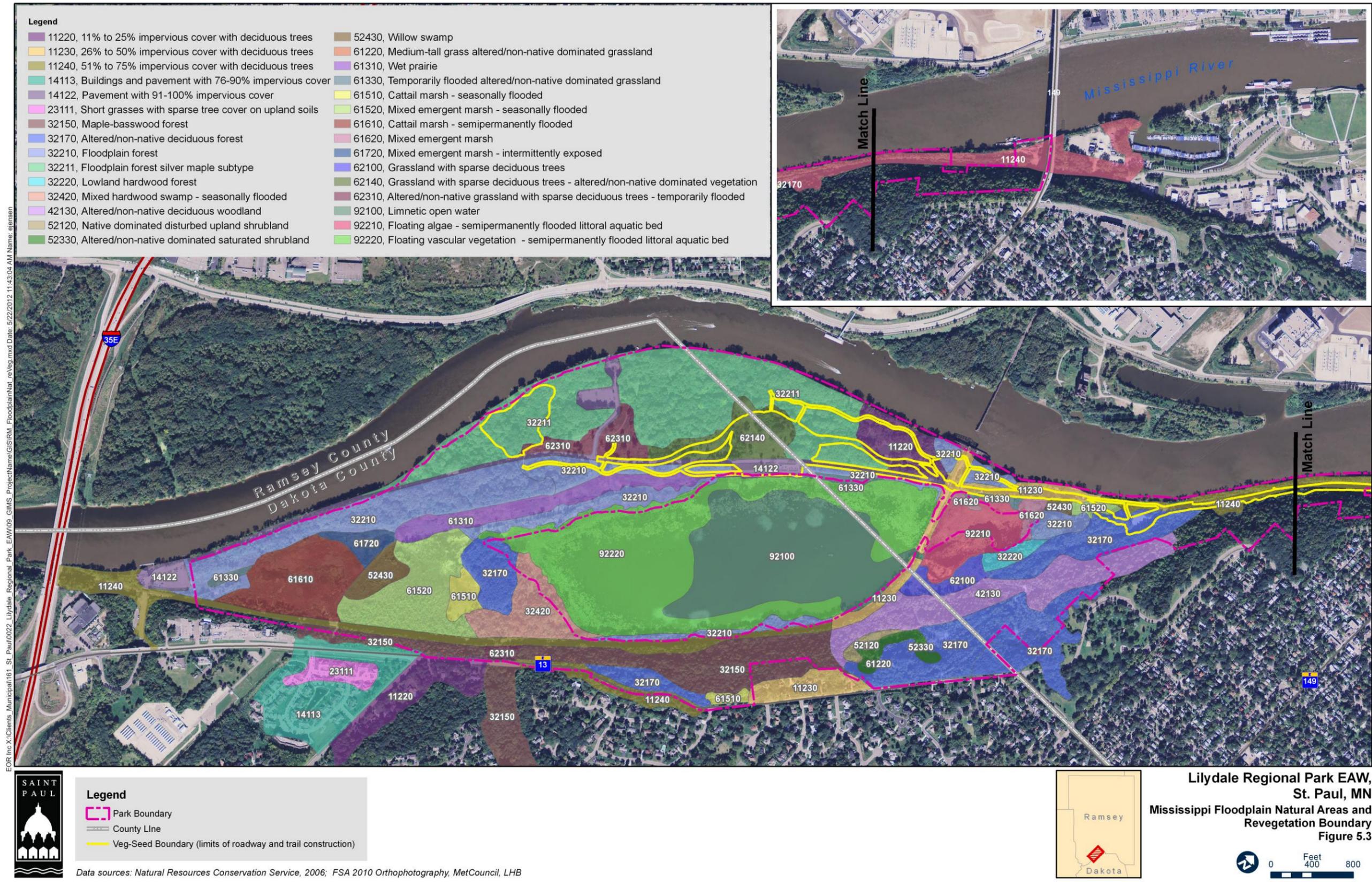


Figure 5.3 Mississippi Floodplain Natural Areas and Revegetation Boundary

6. Description

| a. Provide a project summary of 50 words or less to be published in the EQB Monitor. |

The approved Master Plan Amendment for Lilydale Regional Park works to protect and enhance natural resources in Lilydale Regional Park. Master Plan elements include roadway and trail realignment, picnic shelter, restrooms, dog park, Pickerel Lake access, environmental remediation of dump sites and enhancement of fossil ground trailhead.

| b. Give a complete description of the proposed project and related new construction. |

Lilydale Regional Park is owned and maintained by the City of Saint Paul. All projects proposed for Lilydale Regional Park have been addressed in the January 2010 approved Master Plan amendment.

The 2010 Master Plan Goals and Objectives are listed below. Major activities are described in greater detail in Section 6.4.

Provide Central Gathering Location within the Park

- Picnic shelter to have water, electrical and public restroom
- Realign Lilydale Road to allow gathering area along Pickerel Lake
- Provide lighting on Lilydale Road

Develop Trail System Hierarchy within the Park

- Commuter bike lane: remove guardrail and provide on-road bike lane for commuter cyclist along roadway
- Regional trail: align adjacent to Mississippi River, paved, higher traffic use, 12-foot wide
- Lakeshore trail: along Pickerel Lake, connects to boardwalk, provides wildlife observation along lakeshore, 10-foot wide, paved
- Nature trails: soft trails connecting wildlife viewing locations

Minimize Impact to Restored Landscape by Preserving Large Tracts of Land for Habitat

Remove Invasive Plant Material and Restore to Natural Plant Communities

Provide Stormwater Treatment and Enhanced Water Quality to Pickerel Lake

- Treat stormwater entering from Ivy Falls via restored wetlands
- Provide diverse emergent and submergent plant communities within lake
- Maintain population of large predatory fish
- Implement water testing of Pickerel Lake to monitor water quality
- Collect and treat all storm water on site through best management practices (rain gardens/bio treatment swales/etc.)

Provide Wildlife Observation Areas

- Create natural habitat areas for birds within migratory flyway
- Improve fishing opportunities within Pickerel Lake

Improve Connection to Fossil Grounds

- Develop boardwalk connection along lakeshore
- Redesign Lilydale Road at fossil ground entrance
- Develop trail head at fossil ground entrance for educational groups

Provide Park Entrance Gateway

- Create gateway signage as entering from Harriet Island
- Develop creek to collect bluff seepage away from Water Street
- Enhance signage and park entrance from Highway 13

Improve Safety and Security within the Park

- Create site lines into park through removal of dense invasive undergrowth
- Introduce traffic calming measures to slow traffic along Lilydale Road
- Introduce dog park to provide “eyes” on park
- Remove existing debris and rubble within park and restore to naturalized condition

Strengthen Connection to Mississippi River

- Create views of Mississippi River along Water Street
- Provide regional trail resting areas/overlooks of Mississippi River

6.2. Project Limits

The major portion of the park is located outside the Saint Paul City limits within the City of Lilydale, located in Dakota County. The park is defined by the Mississippi River to the North, Highway 13 located above the river bluffs to the South, Harriet Island Regional Park to the East and the Pool and Yacht Club to the West.

The park consists approximately of 384 acres, the 100-acre Pickerel Lake, and an additional 100 acres of wetland/marsh. No additional parcels are required for the revised Master Plan.

The City of Saint Paul obtained the land now known as Lilydale Regional Park through a land swap agreement with Ramsey County after the Village of Lilydale relocated out of the flood way. In addition to numerous homes and related out buildings, Lilydale Regional Park has been the location of industrial and commercial operations including a brickyard, automobile salvage yard, a marina and a demolition landfill. These past uses are still apparent in the landscape through the large piles of construction debris buried within the park.

6.3. Plan Development Process

A Design Advisory Task Force was assembled to provide advice on the development of the plan. The Task Force provided input and direction to the City of Saint Paul Parks and Recreation. A Community Open House sponsored by West Side Citizens Organization (WSCO) was held to discuss the proposed dog park. All Task Force meetings were open to the public and information was posted on the City of Saint Paul website for additional input.

The Site Plan was approved by the Design Advisory Task Force on July 1, 2009, approved by the Saint Paul Parks Commission on July 15, 2009, and approved by the City of Lilydale City Council on August 10, 2009.

The Master Plan Goals and Objectives are being implemented in stages. Past, completed activities are shown on Figure 6.1 Completed Projects. Presently proposed activities described in detail in this EAW are shown on Figure 6.2 Present Project Plan. Future proposed activities are shown on Figure 6.3 Future Project Plan.



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Data sources: Image supplied by St. Paul Park and Recreation May 2012



**Lilydale Regional Park EAW,
St. Paul, MN**
Completed Projects
Figure 6.1



Figure 6.1 Completed Projects

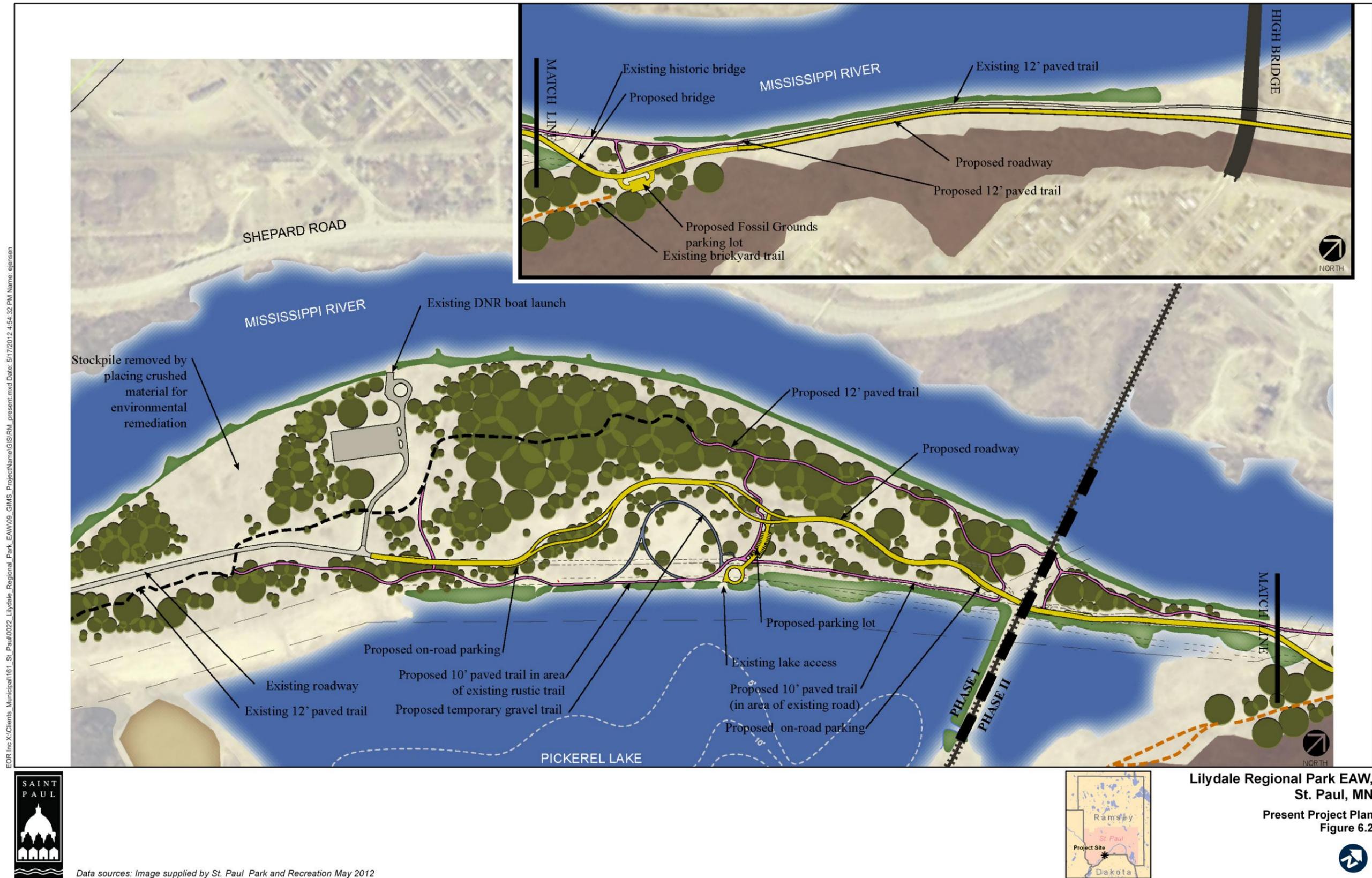


Figure 6.2 Present Project Plan



EOR Inc X:\Clients_Municipal\161 St Paul\022 Lilydale Regional Park EAW\09 GIS\GISRM1_future.mxd Date: 5/17/2012 4:47:17 PM Name: ejensen



Data sources: Image supplied by St. Paul Park and Recreation May 2012



Lilydale Regional Park EAW,
St. Paul, MN
Future Project Plan
Figure 6.3



Figure 6.3 Future Project Plan

6.4. Project Details

The major project elements described in detail in this EAW are listed below. Detailed plans for construction are being prepared under the direction of Saint Paul Parks and Recreation by LHB Architects (LHB).

1. Realignment of Lilydale Road/Water Street
2. Trail Enhancements
3. Trailhead Development at Fossil Grounds to accommodate education groups
4. Removal of environmental contamination sites (former dump sites)
5. Creation of central gathering area with restroom facilities and water service and non-motorized access to Pickerel Lake
6. Burial of existing power lines and water and sanitary sewer service

6.5. Realignment of Lilydale Road/Water Street

The existing local roadway alignment travels along the Mississippi River through floodplain forest, altered non-native grasslands and altered deciduous forest, extending from Harriet Island Regional Park to the City of Lilydale.

The proposed 1.69-mile roadway alignment will be:

- 1.0 miles on in-place roadway
- 0.35 miles on in-place trail corridor
- 0.33 miles new alignment through existing parkland
- Timber bridge over existing creek to provide regional trail and roadway separation

The existing road condition is in disrepair and experiences significant drainage and icing issues throughout the year. Significant concerns exist about continued degradation, erosion, and safety issues for auto, pedestrian, recreational biking, and commuter biking users.

The proposed road is intended to introduce a variety of traffic calming measures to reduce speed and increase safety. It will be designed as a rural roadway with two-way traffic on bituminous pavement. The roadway will provide on-road bike lanes, gravel shoulders, and drainage swales to accommodate for storm water runoff.

A 12-foot wide bituminous trail will run semi-parallel on the north side of the roadway in portions of the alignment. Where existing trail is being removed for new road, trails will be replaced in other interior park areas to make critical connections for a continuous usable trail system.

Roadway construction will require clearing and grubbing activities of existing vegetation and earth moving activities including importing and exporting of excavated materials and structural fill to provide appropriate roadway elevations. Revegetation within the construction boundary will be sensitive to the natural community cover types in Figure 5.3 Mississippi Floodplain Natural Areas and Revegetation Boundary.

Bridge

The roadway and regional trail currently cross an existing creek by utilizing an existing 20-foot wide Mendota Heights historic bridge. The existing bridge creates a pinch point along the roadway and forces trail users onto the road with vehicles. The proposed roadway would provide separation between the roadway and existing regional trail by reconstructing the roadway away from the Mississippi River. The historic bridge would remain for regional trail traffic only, requiring a new bridge for vehicular traffic.

The new bridge will accommodate two-way traffic as well as on-road bicycle lanes. It will be located approximately 120 feet inland from the existing bridge. The bridge will be a 38-foot single span timber slab bridge (Mn/DOT Structure Code 709) with a bituminous wearing course. The bridge will have a clear width of 36 feet and an overall width of 38 feet. The bridge is supported with timber abutments utilizing steel pipe piling that will be filled with concrete after driving.

Bridge construction will occur in an existing delineated wetland. The existing bridge crosses a creek that provides a connection between Pickerel Lake and the Mississippi River. Surrounding low areas are often inundated with water from the Mississippi River providing hydrology to the wetland. Filling within the wetland will be mitigated to the greatest extent possible. This will occur through minimizing the impact to the existing wetland with road alignment and construction practices.

Dimensions/ Road Section

A rural design section was chosen for this roadway as an appropriate park road that facilitates low levels of connector traffic. The limited width of two 10-foot wide travel lanes was purposely designed to limit impacts to Lilydale Regional Park and create a parkway experience while traveling through the park.

The 20-foot roadway will have four-foot wide paved trail/shoulders, one-foot gravel shoulder, and no curb and gutter. The road will be crowned with 2% cross slopes. Ditches, where needed, will be designed with 3:1 side slopes, typical two-foot depth and two-foot bottom, minimizing the overall project footprint and wetland disturbances.

The project design speed is 25 mph. The project length is 8,900 linear feet (ln ft) (1.69 miles), consisting of 5,290 linear feet of reconstructed existing roadway, 1,866 linear feet of 12-foot shared-use trail conversion to road, and 1,744 linear feet of new roadway alignment.

Implementation of roadway and trail improvements is estimated to have a total of 28.1 acres of land disturbance. This includes approximately 23.3 acres for the proposed roadway corridor, Pickerel Clearing site, and Fossil Grounds, and an additional 4.8 acres will be disturbed for proposed trails throughout the park. The proposed construction is scheduled to begin in the late summer or fall of 2012.

Roadway Realignment Summary

Various horizontal and vertical road alignments and geometries were explored. The proposed road design is considered to have the least impact by minimizing the amount of new road construction and utilizing an existing trail corridor through previously disturbed and remediated areas. Special consideration has been paid to the preservation of the large cottonwood trees which extend throughout the parkland in the floodplain. Specific construction practices will be used to preserve trees within 10 feet of the road shoulders and minimize root area disturbance. Guardrails will be installed to save trees in the clear zone. The proposed road design best serves safety and setback issues while minimizing wetland and forest impacts to the greatest degree possible.

6.6. Trail Enhancements (11,433 linear ft of trail replacement)

New road construction would leave a disconnected trail system requiring various segment connections to be made. Road abandonment was identified as a key opportunity to remove and reclaim much of the road corridor while at the same time providing needed trail connections with limited impact to existing woodland cover. Trail segments will be provided riverside and lakeside of the proposed road reconnecting the existing trail system.

Trail Design

The trail design was driven by four initiatives:

1. To build the new roadway with an on-road trail through the park with four-foot trail shoulders adjacent to the 10-foot drive lanes
2. Reconnect segments of trails that may be interrupted by road and remediation projects
3. Utilize abandoned roadway to create a no-impact trail corridor
4. Minimize impacts to the natural environment by locating trails away from wetlands, low areas and significant trees

The majority of the trail system is located along the new roadway as an on-road trail, converts old roadway into trail, uses existing trail corridor, is over the remediation site, or is located over existing gravel parking lots. The overall trail improvements cover 11,433 ln ft of trail as follows:

- 2,564 ln ft of reclaimed road

- 525 ln ft of reclaimed parking or graded areas
- 1,456 ln ft over the remediated dumpsite
- 1,223 ln ft of rebuilt trail
- 5,683 ln ft of new trail alignment

These trails were planned as connected segments into the existing 12-foot wide shared use trail system in the park. The proposed section is a 12-foot bituminous trail at or slightly above existing grades.

6.7. Trailhead Development at Fossil Grounds to Accommodate Education Groups

The Fossil Grounds trailhead provides improvements to the existing trailhead parking area. The current parking lot is a poorly defined gravel lot with above ground power, fragmented wetland, eroded areas, and various areas with debris and other construction materials. The proposal reduces the gravel parking area and introduces bituminous paving. The proposed road realignment will also run through the current parking lot. New spur trail connections link to the riverside trail providing Americans with Disabilities Act (ADA) access to the main trail system. Parking for 19 vehicles is provided, including one ADA stall. Refer to Section 21 of this EAW for more detail on parking. A future kiosk location is provided at the south end of the parking lot where new bike rack parking will be located. The plan avoids any impact to two delineated wetlands at the base of the bluff. The site will be re-vegetated with 20-plus native species trees and native species seeding; all to be consistent with the prevailing natural communities shown in Figure 5.3. Overhead power will be buried. Water service allows for the opportunity to provide potable water to the trailhead.

6.8. Removal of Environmental Contamination Sites (former dump sites)

The 6¼-acre Lilydale Park Dump Site is irregularly shaped rising about 10 to 16 feet above surrounding terrain, primarily covered by herbaceous vegetation with some rubble protruding in several areas of the landfill. In the mid to late 1950s Lilydale Auto Parts along Lilydale Road/West Water Street occupied the Lilydale Park Dump Site. The salvage yard expanded northwesterly, including the Lilydale Auto Parts facility, to approximately 6 acres in size by the mid-1970s. Fill continued to accumulate until sometime after 1974 and by 1980 the landfill received final cover. Some information indicates that the facility itself was demolished and aggregated at the Lilydale Park Dump Site.

Limited investigations were conducted at the Lilydale Park Dump Site in 1988 (Braun), 2010 (Bonestroo) and 2011 (Liesch/AET), respectively. Debris observed within the waste mass includes concrete, brick, metal piping and wood. Contaminants of concern identified at the Lilydale Park Dump Site include asbestos, metals and SVOCs.

Proposed future development for the Lilydale Park Dump Site includes the addition of a picnic shelter and restrooms in connection with the construction of the road realignment and walking/bicycle paths in the surrounding park area. This will require that future users of the proposed picnic area be protected from contact with the waste materials disposed of at the Lilydale Park Dump Site. The Lilydale Park Dump Site is enrolled in the Minnesota Pollution Control Agency (MPCA) Voluntary Investigation and Cleanup (VIC) Program as a site currently under investigation and remediation. A common MPCA-approved method to prevent exposure of the general public to buried waste and/or contaminants of concern is constructing a soil buffer layer.

The City is currently conducting additional investigation and preparing a Response Action Plan (RAP) for submittal and approval by the MPCA. The RAP will be implemented during the construction of the road realignment and walking/bicycle path construction activities.

The Lilydale Park Dump Site is an existing open grassland area and the proposed short grass prairie restoration will enhance the site biodiversity and serve as additional habitat for wildlife. For a portion of the remediation site, the City will initiate re-forestation that transitions from an upland forest condition to floodplain forest at lower elevations. Despite requiring a four-foot fill cap over all of the remediation, all healthy/viable specimen cottonwood trees will be preserved.

6.9. Creation of Central Gathering Area with Restroom Facilities and Water Service and Non-motorized Access to Pickerel Lake

Pickerel Clearing is proposed as the natural gathering point in Lilydale Regional Park. The clearing will offer vistas of Pickerel Lake and the river bluffs, parking and access to trails, a fishing pier, canoe launch, and a large open area. Parking will be provided for 25 vehicles.

Pickerel Clearing would be located over the existing Lilydale Park Dump Site, which is currently a large mound in the park providing elevations above the 100-year floodplain. Capping the existing Lilydale Park Dump Site using material that has already been stockpiled at the Marina Demolition Site would create a safe use area. Capping of the Lilydale Park Dump Site will allow Pickerel Clearing to be usable to recreational standards at an elevation to allow for water and sanitary service above the 100-year flood elevation.

Pickerel Clearing will incorporate a picnic shelter and public restroom. The trail alignment will provide ADA access to rest rooms and the park shelter.

Special consideration has been paid to the preservation of specimen cottonwood trees that will frame the entrance into Pickerel Clearing from the new parking lot.

Utilities

There are currently overhead electric and underground gas utilities within Lilydale Regional Park. Roadway construction will also include providing new sanitary sewer, buried electric, and water main construction for the public restrooms and park shelter. These utilities will extend from Harriet Island (from the north) and will run under the proposed roadway to the center of the park where future restrooms facilities are to be located.

Park Shelter

The open-air shelter has a footprint of 25 x 56 feet (cast in place concrete structural pad on piles), covers 1500 sq ft, and is planned to hold 6 tables, under cover, that can accommodate groups of 24 to 30 people. The shelter has a weathering steel green roof covering the entire footprint supported by 12-foot diameter wood poles and 24-inch glue-lam beams, reflecting the pier supported trestle bridges seen throughout the regional park. The structure has roughly eight feet – six inches clear under the canopy, 12 feet – nine inches to the top of roof and 17 feet to the top of poles. The structure will be open on all four sides. The horizontal living roof and low profile are designed to integrate into the surrounding landscape. The shelter is sited within the open clearing where the use of plant material and forested backdrop blend into the shelter design. A cast-in-place concrete fireplace and table will be the only other permanent elements.

Rest Room

The restroom has a footprint of 26 feet x 22 feet, 600 sq ft, and is programmed for two 2-stall restrooms, and one storage mechanical room. The rest room, like the shelter, has a 31-foot 4-inch x 41-foot 4-inch weathering steel green roof covering the entire footprint, supported by 12-foot diameter wood poles, 24-inch glue-lam beams, and concrete masonry walls clad in limestone, reflecting the pier supported trestle bridges seen throughout the regional park and the natural stone outcroppings in this river bluff environment. The structure has roughly eight feet – six inches clear under the canopy, 12 feet – nine inches to the top of roof and 17 feet to the top of poles. The horizontal living roof and low profile are designed to integrate into the surrounding landscape. The shelter is sited within the clearing site above the 100-yr floodplain. Electric, water, and sewer service will be provided to the site.

c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The proposed project will restore the park to a natural resource-based park. Existing contaminated soils and debris will be removed throughout the park and re-vegetated to enhance the existing natural plant communities described in the Natural Resources Management Plan.

The plan addresses 11 elements identified for Regional Parks and Open Space Master Plans in the Metropolitan Council Parks and Open Space Development Guide/Policy Plan. These elements will make the City eligible to apply for funding to implement the park plan.

Pickerel Lake becomes the main focus in the park by pulling the existing roadway away from the shoreline, offering gathering areas overlooking Pickerel Lake, and enhancing fishing and non-motorized boat access to Pickerel Lake.

The gateway project for Lilydale Regional Park is proposed for construction in 2012 in the area of the Smith Avenue High Bridge. The construction documents that are underway will contain plans for the remaining environmental remediation of the Lilydale Park Dump Site north of Pickerel Lake, road realignment, plans for the segments of trail that will be demolished by the new road design, and erosion control, stormwater management, final grading and landscape plans.

Due to the growing needs of the community and the current condition of the existing roadway, a do-nothing approach is no longer feasible. Safety concerns due to narrow roads, teamed with the absence of shoulders and year-round unchecked impervious runoff, have prompted roadway realignment to fit with the Master Plan goals and objectives.

Construction of the road will do much more in determining how the park will function than merely moving cars through it. Realigning the roadway away from the edge of Pickerel Lake provides the major infrastructure of the park and will provide better access to the lake for park users, introduce traffic calming measures intended to reduce speed, introduce wildlife crossing features, and provide utilities to the area of the proposed future shelter and restroom facility.

Roadway reconstruction removes the road and parking area from the Pickerel Lake shoreline and introduces storm water management. Bluff drainage and excessive winter ice conditions combined with spring flood conditions have resulted in chronic roadway maintenance expense, and this will be addressed through roadway reconstruction.

Reconstruction of the roadway also allows for the incorporation of on-road bike lanes. Trails and accommodations for bicyclists will encourage multi-modal transportation with Lilydale Regional Park. Providing a hierarchy of trails will allow visitors and throughway bike commuters to experience the park at different levels. The existing roadway and trail circulation system is under-equipped to handle the multiple trail functions and users that visit the regional park each day.

6.10. Beneficiaries

The Department of Parks and Recreation is committed to providing relevant recreational opportunities to area residents and visitors. As awareness of environmental issues and benefits of healthy ecosystems are better understood, the demand for opportunities to experience nature in City parks through environmental education and interpretive programming has increased. Habitat enhancement, wildlife observation and protection of the environment along with an education component will foster long term stewardship of City resources. The City will expand its environmental educational program to enhance knowledge and awareness, and include activities that promote service and learning.

In addition to City programs, The Friends of Lilydale, in association with West Side Citizens Organization promote an extensive outreach and public awareness program for the park through their volunteer programs. Friends of Lilydale offer guided fossil digging tours, birding opportunities and guided hikes throughout the park. The Saint Paul Parks Conservancy selected Lilydale Regional Park as their initial park project providing additional public outreach events. Lilydale Regional Park is also part of Mississippi National River and Recreational Area (MNRRA) and has been the site for periodic river tours by Park Service Rangers. Humboldt Senior High School began an environmental studies program in the fall of 2009. Lilydale Regional Park is used as an outdoor classroom for studies of the Mississippi River. Approximately 800 kids from grades seven to 12 will use Lilydale Regional Park at some point as part of their educational program, increasing awareness of the park.

d. Are future stages of this development including development on any other property planned or likely to happen?
 Yes No
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

A multi-million dollar project requires phased implementation that will depend on available funding and construction sequencing. Flexibility, foresight, and patience are essential in staging an undertaking of this magnitude. The first available funding allows for the environmental remediation and roadway, shelter design and

provision of utilities. The Master Plan goals and objectives identify project elements to be part of the future phasing of Master Plan implementation, and are shown on Figure 6.3.

The City is committed to seeking ongoing funding for the rest of the elements identified in the Master Plan Amendment. The City expects to schedule the majority of that work in the next 10 years. The City is always seeking additional funding opportunities and welcomes suggestions in addition to their usual funding mechanisms (Metropolitan Council, State Legacy funding). Once dollars are secured for future projects, the City will engage the public in providing input during the design development of the funded elements. A task force would be formed of stakeholders and interested parties. Many of the same individuals who have volunteered during the process to date will likely want to stay involved. As agencies change and groups evolve, it will be important to engage representatives at the time to keep the advisory task force relevant. Project updates will be posted on the City Parks and Recreation website.

e. Is this project a subsequent stage of an earlier project? Yes No
If yes, briefly describe the past development, timeline and any past environmental review.

Previous environmental remediation projects removed contaminated materials and stockpiled fill material within the park. Reuse of this material allows for public restrooms to be constructed above the 100-year flood elevation within the Mississippi River floodplain. The location of previous activities is shown on Figure 6.1.

7. Project Magnitude Data

Total project acreage
Number of residential units: unattached attached maximum units per building
Commercial, industrial or institutional building area (gross floor space): total square feet

Indicate areas of specific uses (in square feet):
Office Manufacturing
Retail Other industrial
Warehouse Institutional
Light industrial Agricultural
Other commercial (specify)
Building height If over 2 stories, compare to heights of nearby buildings

The project boundaries include approximately 384 acres. Cover type break outs are provided in Section 10 of this EAW. The proposed project does not include residential, commercial, industrial or institutional buildings.

8. Permits and Approvals Required

List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 8.1 Permits Received for Environmental Clean-Up

Unit of Government	Type of Application	Status
City of Lilydale	Conditional Use Permit	Received 05/10/2010
City of Saint Paul	Conditional Use Permit	Received 08/27/2010
MPCA	Environmental Clean-Up (NPDES)	Received 10/12/2010
City of Saint Paul	Site Plan Review	Received 09/01/2010

Table 8.2 Permit Review Received for Environmental Clean-Up

Unit of Government	Type of Application	Status
MnDNR	No Rise Certificate	To Be Received June 2012
MPCA	VIC Enrollment	Submitted 04/13/2012

Table 8.3 Permits Pending for Roadway Work

Unit of Government	Type of Application	Status
City of Saint Paul	Conditional Use Permit	To Be Submitted June 2012
City of Saint Paul	Mn Wetland Conservation Act (WCA)	TEP Review to Occur after 05/15/2012
MnDNR NHIS	Review	Received 05/15/2012
State Historic Preservation Office (SHPO)	Review	Review after Determination from Army Corps of Engineers Regarding Mn WCA

Table 8.4 Other Anticipated Agency Review for Roadway Work

Unit of Government	Type of Application	Status
Lower Mississippi Watershed Management Organization (LMWMO)	Review	
City of Saint Paul	Work within the Right-of-Way	Right-of-Way Needs To Be Defined
City of Lilydale	Review	
MPCA	VIC Review	
US Fish and Wildlife Service (USFW)	Review of Bald Eagle Nest	
Met Council Environmental Services (MCES)	Sanitary Sewer Extension Permit – Review	To Be Submitted Near Time of Construction (May require 2 weeks of lead time)
MPCA	Sanitary Sewer Extension Permit	To Be Submitted Near Time of Construction (May require 2 weeks of lead time)
Minnesota Department of Health (MDH)	Plan Review for Water mains	To Be Submitted Near Time of Construction (May require 2 weeks of lead time)
MPCA	General Stormwater Permit for Construction Activity (NPDES)	To Be Submitted Near Time of Construction (May require 30 days of lead time)
Chicago – Northwestern Railroad	Review	Railroad contacted week of May 21, 2012. Currently researching determination of roadway and railroad easements to determine which was in place first prior to discussion with Railroad.
Xcel Energy	Review and Coordination	Design for burial of existing electrical lines is currently underway. Further information for gas lines is needed.
Centurylink	Review and Coordination	

9. Land Use

Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

9.1. Land Use and Compatibility

In the early 1980s, the City of Saint Paul acquired the land now known as Lilydale Regional Park. The park is owned and maintained by the City, though the majority of the park is located outside the limits of Saint Paul and Ramsey County and within the City of Lilydale and Dakota County. To complete the park Master Plan, no additional land purchases are required.

Lilydale Regional Park is comprised of approximately 384 acres of land located within the floodplain of the Mississippi River, which includes the 100-acre Pickerel Lake and an additional 100 acres of wetland/marsh. The park is generally wooded with paved bike and pedestrian trails. In addition, a MnDNR boat launch allows access to the Mississippi River. The park is segmented by Lilydale Road, which runs in a southwest to northeast direction through the middle of the park. The park property is generally level with some lowlands and mounds left over from former land uses or soil remediation efforts. Though, steep bluffs border Pickerel Lake on the east and an elevation change of approximately 10 feet exists adjacent to the Mississippi River.

The park is currently zoned R-4 (One-Family Residential District). See Panel 21 of the City of Saint Paul Zoning Districts Map. In addition, the park also lies in the RC-1 Floodway District (River Corridor Floodway Overlay District) and the RC-2 Flood Fringe District (River Corridor Flood Fringe District). Development within the RC-1 Floodway District and the RC-2 Flood Fringe District will require meeting the standard for a Conditional Use Permit of those Districts as outlined in the municipal Code of Ordinances.

9.2. Potential Environmental Hazards

An environmental assessment report prepared circa 1973 for Ramsey County includes the Twin City Brick Company as a tenant from the early 1890s, while the town of Lilydale occupied the land until the mid-1970s when it was relocated out of the floodplain to its current location on the river bluffs. According to the Environmental Assessment - Phase I and Phase II reports prepared for the Minnesota Pollution Control Agency by Delta Environmental Consultants, Inc. (Delta) on June 29 and September 23, 2004 respectively, other historical land uses include an auto sales or salvage yard/landfill from the 1960s until 1973, a marina, farmland, and scattered residences until demolition in 1973.

After 1973, portions of the park were the site of uncontrolled dumping of materials such as household rubbish, roofing materials, drums, and other construction debris. As previously mentioned, Phase I and Phase II Environmental Assessments (EA) were completed for the property known as the Pickerel Lake Site.

A Phase I EA provides information on potentially contaminated properties in a subject area. The properties are identified through review of historic land use records and aerial photographs, federal and state agency databases and county/city records, as well as current property condition. Sites of potential concern identified by the Phase I EA can then be categorized into three risk areas: high, medium, and low environmental risk. In general, high environmental risk sites are properties that have a documented release of chemicals or other strong evidence of contamination such as soil staining or storage of large volumes of petroleum or other chemicals. High-risk sites include dry cleaners, sites with non-petroleum contamination enrolled in the MPCA VIC program and sites with petroleum contamination being actively investigated through the MPCA Petroleum Remediation program. Medium environmental risk sites include properties where relatively smaller volumes of petroleum or other chemicals are stored with no documented spills or releases. Medium risk sites also include properties with documented releases that have been “closed” or declared “inactive” (no further cleanup action deemed necessary) by the MPCA. “Closed or “inactive” sites are considered medium risks because residual soil or groundwater contamination may exist at the site. Low environmental risk sites include properties where small volumes of chemicals or hazardous materials are/have been used or stored, such as residences, schools, churches and small manufacturing facilities with no reported chemical releases.

The Phase I EA prepared by Delta for the project area was in general accordance with the American Society for Testing and Materials (ASTM) E 1527-00 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and the MPCA VIC Guidance Document #8: *Phase I Investigation*. The ASTM E 1527-00 standard defines the term *recognized environmental condition* as meaning “the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the *property* or into the ground, ground water, or surface water of the *property*.”

As part of the Phase I EA, an asbestos survey and radon survey were excluded from the scope. However, the Phase I EA did include the review of historical data revealing three adjacent or nearby dump sites. The first is the Lilydale Park Dump Site (location of proposed picnic shelter). The second is the JC White Demolition (location of existing Pickerel Lake parking lot). The third is Lilydale Marina Demolition (location of proposed dog park). However, according to the Report – Lilydale Regional Park Natural Resources Management Plan prepared for the City of Saint Paul by Bonestroo in May 2009, a fourth dump site exists. This dump site is identified as the Kamish Demolition (located at the south end of Pickerel Lake).

The Phase I EA has identified the following recognized environmental conditions:

- A review of regulatory records indicates the subject property may be listed as a Dump Site in the MPCA VIC program. Listing of the subject property on the MPCA database is a recognized environmental condition.
- Historical records indicate the subject property has been subject to uncontrolled dumping and filling with various materials including demolition debris (asphalt, bricks, concrete slabs, concrete blocks, roofing material, etc.), abandoned drums, and household trash. The presence of unregulated fill material is a recognized environmental condition.
- The subject property was routinely filled with screened street sweepings to fill in ruts and low areas in the parking lot. This material was not tested prior to placement. The potential for impacts due to contaminated street sweepings is a recognized environmental condition.
- Historical records indicate the presence of a landfill/auto salvage yard immediately northwest of the subject property. Potential cross-contamination of the ground water at the subject property from automotive fluids represents a recognized environmental condition.

The Phase I EA has identified the following historical recognized environmental condition:

- The subject property was once a used car lot. Potential leaks or spills of automotive fluids from the cars onto the ground surface are a historical recognized environmental condition.

The Phase I EA has identified the following de minimis environmental condition:

- Historical site plans indicate the presence of a 20-inch underground gas pipeline at the subject property. The potential presence of an underground gas pipeline at the subject property is a de minimis environmental condition.

As part of the park Master Plan process, a RAP and Construction Contingency Plan (CCP) were developed in accordance with MPCA VIC guidance. The Response Action Plan and Construction Contingency Plan - Lilydale Park Dump Site and Lilydale Demolition Site prepared for the City of Saint Paul by Bonestroo on January 29, 2010 were prepared to assist the City of Saint Paul with the removal plan for the Lilydale Marina Demolition and Lilydale Park Dump Sites. The RAP and CCP address the removal of accumulated debris and other waste material necessary to initiate the implementation of the park Master Plan process.

Metropolitan Council approved the Master Plan Amendment for Lilydale Regional Park in January 2010. It was required to reflect the vision of protection and enhancement of natural resources within Lilydale Regional Park. One of the major program elements of the master plan includes the removal of environmental contamination sites (former dump sites).

To fulfill the environmental contamination program element, environmental remediation activities have taken place with recycled reusable fill material being reused within the park. Reuse of this material will allow for public restrooms to be constructed above the 100-year flood elevation within the Mississippi River floodplain.

9.3. Remediation of the Lilydale Park Dump Site

Section 6.8 of this EAW describes the proposed remediation of the Lilydale Park Dump Site.

10. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development:

	Before	After		Before	After
Types 1-8 wetlands	200	200	Lawn/landscaping	0	6
Wooded/forest	67	60	Impervious surfaces	17	20
Brush/Grassland	16	14	Stormwater Pond	0	1
Cropland	0	0	Other (describe) Bluff	84	84
TOTAL	384 acres				

If Before and After totals are not equal, explain why:

The cover type changes result in nine acres of brush/grassland and wooded/forest reduction. However, the seven acres of lawn/landscaping and stormwater ponds are primarily native species landscaping. Furthermore, there is an impact to wetlands resulting in a slight reduction which will be mitigated at a 2:1 ratio. This general summary of cover types utilized the finer break down of land cover types shown in Figure 5.2 that was generated using the Minnesota Land Cover Classification System (MLCCS) during preparation of the Lilydale Natural Resources Management Plan.

11. Fish, Wildlife and Ecologically Sensitive Resources

a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources on or near the site? X Yes ___No

If yes, describe the resource and how it would be affected by the project. Describe any measures that will be taken to minimize or avoid adverse impacts. Provide the license agreement number (LA-___) and/or Division of Ecological Resources contact number (ERDB 20120329) from which the data were obtained and attach the response letter from the DNR Division of Ecological Resources. Indicate if any additional survey work has been conducted within the site and describe the results.

The Minnesota Dept. of Natural Resources (MnDNR) Division of Ecological Resources contact number (ERDB 20120329) from which the following data were obtained is discussed in more detail below. In addition, a December 11, 2008 Natural Heritage Database search was used for the preparation of the Lilydale Regional Park Natural Resource Management Plan and was reviewed in preparation of this EAW. The NRMP land cover mapping shown on Figure 5.3 depicts the details within the overall landscape context of wooded slopes and river corridor floodplain. Figure 5.2 identifies any of the Regionally Significant Ecological Areas (RSEAs) in the region, as well as Minnesota County Biological Survey (MCBS) ecologically noteworthy sites and their condition rank.

11.1. Mammals

Lilydale Regional Park currently provides habitat for many species of mammals. Mammals likely utilizing the park are represented by several orders of species. The most representative order of species is likely rodents (squirrels, mice, voles, beaver, muskrat) followed by carnivores (fox, raccoon, weasels, mink, otter), lagomorphs (rabbits), undulates (white-tailed deer) and the chiropterans (bats).

A survey conducted by the National Park Service in January of 2011 confirmed the presence of river otter in Lilydale Regional Park. The survey was a one-time survey and did not confirm whether it was a transient or resident. Considering the park's adjacency to the Mississippi River corridor and available suitable habitat, otters are a species of interest that are an important design consideration for the park improvement project.

There are several known bat hibernacula including a cave, old cellars and mines in the vicinity of the Lilydale Regional Park. All four of Minnesota's cave bats, two species state-listed as special concern and two species proposed for listing as special concern, have been documented in this area. Species noted include Northern Myotis and Big Brown Bat. The proposed project does not directly affect any of the known bat hibernacula.

11.2. Amphibians & Reptiles

Lilydale Regional Park likely supports a robust population of herpetiles represented by many species. Although no known surveys of herpetiles are available for the park, a frog and toad species list from the adjacent Fort Snelling State Park confirms the presence of nine species of amphibians including American Toad, Gray Treefrog, Cope's Gray Treefrog, Spring Peeper, Boreal Chorus Frog, Green Frog, Mink Frog, Wood Frog and Northern Leopard Frog. Other amphibians likely present in the park include Tiger Salamanders.

Several species of reptiles including turtles, lizards and snakes are known to exist within the general park vicinity. Relatively common species such as the Prairie Skink, Common Garter Snake, Red-bellied Snake, Painted Turtle and Snapping Turtle are likely present within the park. The DNR NHIS confirmed the presence of the Western Fox Snake and the Milk Snake within or in close proximity to Lilydale Regional Park. Some less common snakes potentially present in the park include the Racer, Northern Water and Gopher. Of these less likely snakes, the Racer and Gopher are listed as special concern. The Snapping Turtle is also listed as special concern by the MnDNR.

The most significant herpetile species of concern in Lilydale Regional Park is the Blanding's Turtle. The MnDNR Natural Heritage Database confirms the presence of a Blanding's Turtle within Lilydale Regional Park over the past decade. More recent use of Lilydale Regional Park by Blanding's Turtles was discussed in a conversation with John Dee with the City of Saint Paul. Blanding's Turtle monitoring data confirm that several adult females have periodically been located in the park, likely moving between the wetland habitat near Pickerel Lake and across the Mississippi River to Crosby Park. Important design considerations as well as construction practices (see below) have been incorporated into the proposed project to minimize impacts to Blanding's Turtles.

11.3. Mammal and Herpetile Impact Minimization Considerations

Providing safe roadway passage for terrestrial and semi terrestrial wildlife species has been incorporated into park design plans and park programming. Target species include the River Otter and Blanding's Turtle. However, multiple species will benefit from the proposed design considerations and educational programming.

Specific design considerations include:

- Silt fencing will be set up to keep turtles and otters out of construction areas. Silt fencing will be removed after the area has been re-vegetated.
- All re-vegetated areas will be native grass and wildflower mix.
- Wetland crossings were avoided and limited to one area where physical site constraints did not allow for an alternative route.
- Roads were kept to minimum standards on widths and lanes (this reduces road kills by slowing traffic and reducing the distance turtles and otters need to cross).
- Tunnels (culvert pipe) are implemented for turtle and otter crossings.
- Roads were designed with ditches rather than curbs or below grade profiles, which tend to trap herpetiles on the drive surface.
- Culverts near wetland areas are 36 inches or greater in diameter, and elliptical or flat-bottomed.
- Road placement avoided separating wetlands from adjacent upland nesting sites.

- The singular wetland/creek crossing provides a 38-foot single span timber bridge. The creek channel is eight-foot wide from top of bank to top of bank, providing 30-feet of adjacent above-bank wetland crossing area.
- Erosion control blankets used in areas adjacent to wetlands or in areas of known herpetile use will not contain netting with smaller mesh size than ½” or only types with non-welded netting will be used. An alternative shall be to use netless or rapidly degrading material in sensitive areas.

Specific construction-period education and park programming include:

- Providing a flyer with an illustration of a Blanding’s Turtle will be given to all contractors working in the area.
- Turtle/wildlife crossing signs will be installed adjacent to road crossing areas used by Blanding’s Turtles to increase public awareness and reduce road kills.
- During construction, turtles that are in imminent danger will be moved, by hand, out of harms way. Turtles that are not in imminent danger will be left undisturbed.
- Workers in the area will be informed that Blanding’s Turtles nest in June, generally after 4pm, and should be advised to minimize disturbance if turtles are seen.
- If a Blanding’s Turtle nest is encountered, contractors will have instructions not to disturb the nests.
- For construction activities during the months of May through October, an environmental monitor will check for Blanding’s Turtles immediately prior to construction to avoid any inadvertent mortality.

11.4. Bird Surveys

Lilydale Regional Park is an important metropolitan location for birding enthusiasts. Two local birders including Clay Christensen and Val Cunningham conducted 35 surveys of Lilydale Regional Park for the Mississippi River Twin Cities Important Bird Area Land Bird Monitoring Project from 2007 through 2010. The project was sponsored by Audubon Minnesota and followed a formal protocol. The survey team stopped at defined survey points (see Figure 11.1), listened and looked for five minutes at each point, and recorded the number of each species of bird observed. The team counted only land birds, not water birds or wading birds. The intent was to survey birds that were using the land resources. The survey team did observe water birds, ducks, herons, egrets, in the water or flying over, but did not include them in the survey data. The 2007 to 2010 survey data was collected at 14 points throughout Lilydale Regional Park. Survey points can be seen on Figure 11.1.

Birding data was collected in 2011 as part of the Important Bird Area monitoring program (www.ibamonitoring.org). These data were extracted and added to the 2007-2010 database prepared by Christensen and Cunningham. Although a few new species were recorded in the database in 2011, the species lists were very similar. It appears as though water and wading birds were not included in the 2011 surveys.

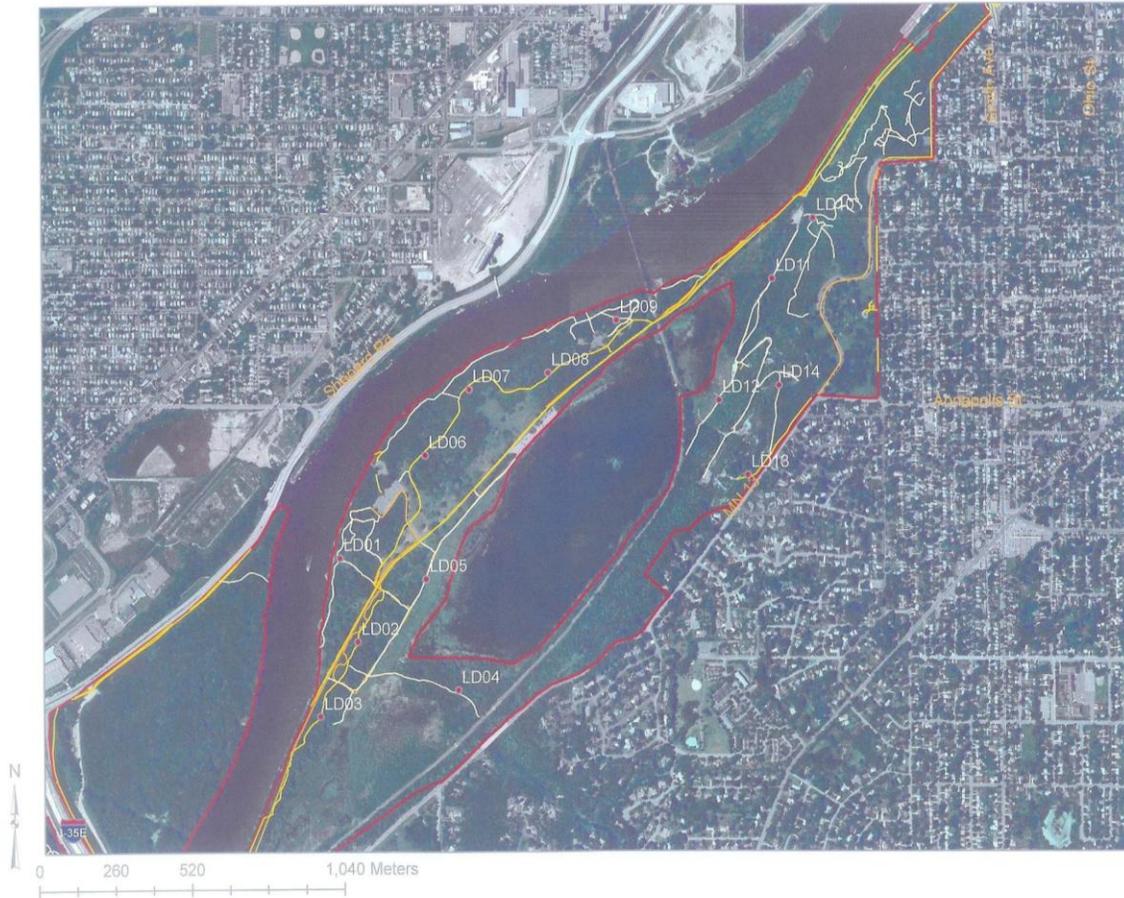
A site visit, April 30, 2012 by Jason Naber of Emmons & Olivier Resources (EOR), confirmed several species of water and wading birds utilizing Pickerel Lake. Pickerel Lake does provide significant habitat for water and wading birds, although an extensive species list is not available.

Lilydale Regional Park is a locally important area for bird habitat. For the species identified during the 2007 to 2011 land bird monitoring, there are two species identified as “Special Concern” by the MnDNR, those being the Bald Eagle and the Red-shouldered Hawk. The Bald Eagle was frequently observed during the sampling events (19 of 35) and the Red-shouldered Hawk only once throughout the survey period.

Within the list of species surveyed that are known to nest in the project vicinity (see Table 11.1), 13 species are designated by the MnDNR as Species of Greatest Conservation Need (SGCN). Of those 13 species, seven of them were noted at Lilydale Regional Park three or less times during the 2007-2011 survey period. The more frequently observed SGCN species included Eastern Wood-Pewee, Least Flycatcher, Rose-breasted Grosbeak, Northern Rough-winged Swallow, Ovenbird, and Wood Thrush. The less frequently observed SGCN species known to nest in the project vicinity included Swamp Sparrow, Winter Wren, Brown Thrasher, Field Sparrow, Marsh Wren and Sedge Wren.

Three SGCN species have been documented migrating through the site (see Table 11.2). The most frequent of which is the White-throated Sparrow. The remaining two species, Olive-sided Flycatcher and Golden-winged Warbler were noted only twice and once respectively over the 2007-2011 monitoring period.

Figure 11.1 Bird Survey Sampling Points (Christensen and Cunningham) for 2007-2010 Data.



Of the 14 survey points included in the 2007 to 2010 surveys conducted by Christensen and Cunningham, LD01, LD02, LD03, LD05, LD06, LD07, LD08, LD09 and LD10 are in close proximity to proposed park improvements.

Table 11.1 Bird species likely to be locally breeding that were documented from 39 sampling events at Lilydale Regional Park (2007-2011).

Species Name	# of Surveys with Species Confirmation	State Status	Species Name	# of Surveys with Species Confirmation	State Status
American Robin	39		House Finch	9	
Black-capped Chickadee	39		Rose-breasted Grosbeak	8	SGCN
American Goldfinch	38		Yellow Warbler	8	
Downy Woodpecker	38		Northern Rough-winged Swallow	7	SGCN
Northern Cardinal	38		Ovenbird	7	SGCN
American Crow	37		Red-tailed Hawk	7	
Song Sparrow	37		Yellow-throated Vireo	7	
White-breasted Nuthatch	34		Broad-winged Hawk	5	
Brown-headed Cowbird	32		Wood Thrush	5	SGCN
Red-winged Blackbird	32		Cooper's Hawk	4	
Blue Jay	31		Wild Turkey	4	
Tree Swallow	29		Brown Creeper	3	
Red-bellied Woodpecker	28		Eastern Towhee	3	
Blue-gray Gnatcatcher	25		Northern Waterthrush	3	
Common Grackle	25		Ruby-throated Hummingbird	3	
House Wren	25		Scarlet Tanager	3	
Baltimore Oriole	24		Swamp Sparrow	3	SGCN
Northern Flicker	24		Turkey Vulture	3	
Hairy Woodpecker	23		American Kestrel	2	
American Redstart	22		Chipping Sparrow	2	
Warbling Vireo	22		Eastern Bluebird	2	
Common Yellowthroat	21		Red-breasted Nuthatch	2	
Pileated Woodpecker	20		Winter Wren	2	SGCN
Red-eyed Vireo	20		Brown Thrasher	1	SGCN
Bald Eagle	19	SC	Field Sparrow	1	SGCN
Great Crested Flycatcher	19		Great Horned Owl	1	
Gray Catbird	18		House Sparrow	1	
Eastern Wood-Pewee	14	SGCN	Marsh Wren	1	SGCN
Mourning Dove	14		Osprey	1	
Eastern Phoebe	13		Red-shouldered Hawk	1	SC
Indigo Bunting	13		Rock Pigeon	1	
Belted Kingfisher	12		Savannah Sparrow	1	
European Starling	12		Sedge Wren	1	SGCN
Chimney Swift	11		Sora	1	
Least Flycatcher	11	SGCN	Wood Duck	1	
Cedar Waxwing	9		Yellow-bellied Sapsucker	1	SGCN

SC= Special Concern

SGCN = Species of Greatest Conservation Need

Table 11.2 Bird species unlikely to be locally breeding that were documented from 39 sampling events at Lilydale Regional Park (2007-2011).

Species Name	# of Surveys with Species Confirmation	State Status
Yellow-rumped Warbler	27	
White-throated Sparrow	20	SGCN
Ruby-crowned Kinglet	14	
Tennessee Warbler	10	
Nashville Warbler	8	
Palm Warbler	8	
Chestnut-sided Warbler	5	
Black-and-white Warbler	4	
Golden-crowned Kinglet	4	
Northern Parula	4	
Blackpoll Warbler	3	
Magnolia Warbler	3	
Swainson's Thrush	3	
Black-throated Green Warbler	2	
Dark-eyed Junco	2	
Lincoln's Sparrow	2	
Olive-sided Flycatcher	2	SGCN
Blackburnian Warbler	1	
Blue-headed Vireo	1	
Golden-winged Warbler	1	SGCN
Merlin	1	
Orange-crowned Warbler	1	
Solitary Sandpiper	1	

SC= Special Concern

SGCN = Species of Greatest Conservation Need

Two species of special concern have been identified within Lilydale Regional Park during the 2007 to 2011 time period and the NHIS database includes records for the Peregrine Falcon, Bald Eagle and Bell's Vireo in the project vicinity. Although not included in the NHIS database a Red-shouldered Hawk was sighted once during the survey period and the Bald Eagle was frequently observed. The Natural Heritage Database records confirm the Bald Eagle nesting within the park boundary. It is not certain if the nest is currently active in 2012. Regardless of the nest's current status, the eagle nest site is identified in construction plans with buffer zones and instructions to the contractor for limiting disturbance, noise restrictions, and directions for site maintenance and response measures.

The most significant potential impact to avian habitat is likely to occur to the resident species nesting within the park. Construction activities have the potential to destroy or disturb nests if actions such as tree clearing are conducted during the nesting season. The species listed in Table 11.1 are almost exclusively tree nesting species. Special care should be taken to minimize impacts to active nesting bird species.

The proposed improvements have the potential to increase park usage by humans. Increased usage and accessibility has the potential to disturb both resident nesting and migratory species. The incorporation of new trails and park facilities will disrupt core habitat areas that may negatively affect species not acclimated to edge habitat and more suited to larger habitat tracts. The long history of monitoring conducted by Christiansen, Cunningham and others will provide important baseline data for assessing affects caused by proposed park improvements. The increased accessibility resulting from improvements to the park will likely increase bird watching opportunities and provide an important educational programming component to the park.

11.5. Fish

Pickerel Lake is a shallow lake located in Lilydale Regional Park. The close proximity to the Mississippi River and frequency of flooding would likely change the species assemblage overtime. The last known survey by the DNR in 2004 noted that Bluegill at the most abundant species and that they were small with an average length of 4.5 inches. Black Crappie was present in low to moderate numbers with an average length of 6.5 inches and a few up to 11 inches. Northern Pike were abundant and ranged in length from 19 to 30 inches, with a 24-inch average. Other species present in low numbers are Pumpkinseed Sunfish, Largemouth Bass, Walleye, Yellow Perch, Carp, Redhorse, Freshwater Drum, Bowfin, Black Bullhead, Yellow Bullhead, and Golden Shiner. A winter aeration system was installed in 2005 to help improve overwintering of fish species.

Pickerel Lake currently provides public fishing opportunities including shore fishing and lake surface fishing from non-motorized boats. Proposed plans for the park include several improvements adjacent to Pickerel Lake that will increase use of the lake and fishing opportunities. An improvement to the lake access is proposed and motorized use of the lake is considered. No significant impacts to the lake are proposed or expected as a result of the park improvement project.

Two species of fish were noted in the NHIS database, including the Pugnose Shiner and Paddlefish. Both species were found in the Mississippi River. This project does not propose any activities that directly affect the Mississippi River.

11.6. Mussels

One Freshwater Mussel Concentration Area was included on the NHIS database report. The site is located upstream of Lilydale Regional Park and includes a high diversity of species. Individual species of freshwater mussels noted in the NHIS database include Mucket (dead specimens only), Rock Pocketbook, Purple Wartyback (dead specimens only), Butterfly, Elephant-ear (dead specimens only), Spike (dead specimens only), Ebonyshell (dead specimens only), Yellow Sandshell (dead specimens only), Scaleshell (1800's specimen only), Black Sandshell, Hickorynut (dead specimens only), Sheepnose (dead specimens only), Round Pigtoe (dead specimens only), Winged Mapleleaf (dead specimens only), Monkeyface (dead specimens only), Wartyback, Pistongrip (dead specimens only), and Fawnsfoot. This project does not propose any activities that directly affect the freshwater mussel habitat in the Mississippi River.

12. Physical Impacts on Water Resources

Will the project involve the physical or hydrologic alteration — dredging, filling, stream diversion, outfall structure, diking, and impoundment — of any surface waters such as a lake, pond, wetland, stream or drainage ditch? _X_Yes _No

If yes, identify water resource affected and give the DNR Public Waters Inventory number(s) if the water resources affected are on the PWI:

Describe alternatives considered and proposed mitigation measures to minimize impacts.

Pickerel Lake is listed on the MnDNR Public Waters Inventory (19-79P). No significant impacts to the lake are proposed or expected as a result of the proposed Master Plan implementation activities. Pickerel Lake currently provides public fishing opportunities including shore fishing and lake surface fishing from non-motorized boats. Proposed plans for the park include changing access adjacent to Pickerel Lake that will increase use of the lake and fishing opportunities.

Bridge reconstruction will occur at an existing wetland. The existing bridge crosses a creek that provides a connection between Pickerel Lake and the Mississippi River. Surrounding low areas are often inundated with water from the Mississippi River. The existing wetland delineated as Wetland D can be found on Figure 4 of the 2009 Bonestroo Wetland Delineation Report. Figure 5.3 of this EAW provides the landscape context of wetlands adjacent to the crossing and nearby. A wetland permit is currently under evaluation by the Technical Evaluation Panel (TEP), and permitted impacts and mitigation banking is under consideration. The most recent field review meeting was held May 17, 2012. The anticipated area of impact is 16,949 square feet of fill. Final design will minimize this area to greatest extent possible through road alignment and construction practices. The final road design best serves safety and setback issues while minimizing wetland and forest impacts to the greatest degree

possible. All trail improvements proposed in the park were located to minimize impacts to the existing natural environment by siting trails away from wetlands, low areas and significant trees.

Lilydale Regional Park currently provides wetland mitigation for past Metropolitan Airports Commission (MAC) impacts. These mitigation sites located along the smaller bay of Pickerel Lake were constructed in 1996 and completed in 1997. MAC paid and received wetland credits for these mitigation sites. This project does not propose to impact any of the existing wetland mitigation sites located within Lilydale Regional Park.

13. Water Use

Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)? X Yes No
If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

Public water supply and sanitary sewer will be connected to provide a small lavatory facility in the park. A 2-inch HDPE water service and a 2-inch HDPE sanitary sewer force main will be installed. These services will run under Water Street and will connect into the existing system located under Water Street approximately 800 feet east of the railroad Bridge.

The county well index lists five wells located in or near the park. It lists one of these wells as capped and recorded (well id # 00256885) as such in the Mn Dept of Health records. See Figure 5.2 Sensitive Resources for locations of the wells.

The site was also formally the home of Lilydale Village which included several commercial lots, a town village, and numerous residential lots. Many of these lots had small individual wells to provide potable water. Due to repeated flooding the village was moved to the bluff. Based on the Environmental Intrusions Map dated February 1973, these wells were scattered throughout the village and were to be removed along with all of the buildings, wells, cesspools and secondary electrical lines when the village was relocated.

It is assumed that the abandoned wells in the park were sealed. However, it is possible that not all of old wells located throughout the park were properly sealed. If unsealed wells are encountered during construction of the park improvements, they will be identified and properly sealed.

Two areas have been identified for further investigation:

Wetland F from the Wetland Delineation Report dated November 10, 2009 is located near the entrance to the boat launch. The wetland delineation indicates that this wetland is being created due to an upwelling in the area. It is unclear if this is due to a natural spring or if it maybe an artificial upwelling caused by an old well.

Actively flowing water has been noted in the area by the fossil grounds entrance near two of the wells shown on the county well index (well id # 200429 & 200430). This water may be from a seep from the bluff areas or upstream runoff, however further investigation is warranted to ensure that the source of the water is not from abandon well.

Dewatering will not be required for the proposed project activities.

14. Water-related Land Use Management District

Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? X Yes No
If yes, identify the district and discuss project compatibility with district land use restrictions.

Minnesota MnDNR statewide minimum shoreland standards apply to all lakes greater than 25 acres (10 acres in

municipalities) and rivers with a drainage area two square miles or greater. These standards apply to the use and development of shoreland property including: a sanitary code, minimum lot size and water frontage, building setbacks and heights, land use, BMPs, shoreland alterations, subdivision and PUD regulations. The Shoreland Management Act regulates all land within 1,000 feet of a lake and 300 feet of a river and its designated floodplain. The project area is located within the shoreland zone of the Mississippi River. Buildings are proposed for the future phase of this project. However, sanitary sewer is currently proposed to be brought in for installation of a lavatory facility. This facility will be located on the high ground being created in the middle of the park. In order to meet MnDNR shoreland standards the building will need to accommodate the 50-foot minimum setback for sewered buildings and be at least 3-feet above the highest known water elevation.

The majority of the project area is within the FEMA Floodway District. The City of Saint Paul allows for fill within a floodway as a conditional use. The application for a Conditional Use Permit (CUP) is described in Section 8 and 27 of this EAW. The City has completed a no-rise analysis which concluded that proposed grading will not adversely impact flood elevations on the Mississippi River.

No designated wild or scenic river land use district is found in the project area.

Saint Paul's Mississippi River Critical Area Zoning Overlay District

The Mississippi River Critical Area, which runs 72 miles from Ramsey to Hastings, was established in 1976 pursuant to State Law. The Critical Area has environmental and scenic standards that operate through local zoning. Zoning codes up and down the river must meet, at minimum, the standards of the State's Critical Area Laws and the Governor's Executive Order that designated the area along the Mississippi River.

Purpose of the Critical Regulations

The purpose of the Critical Area regulations is to protect, preserve and enhance the unique and valuable resources of the River Corridor. These resources are natural, ecological, and biological; they are also economic, historical, cultural, and scenic. The river in Saint Paul includes both urban development and natural amenities of regional and national significance. The Critical Area regulations attempt to balance these needs and opportunities for land in the River Corridor, and to improve the synergy among them.

15. Water Surface Use

*Will the project change the number or type of watercraft on any water body? Yes No
If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.*

There is currently a canoe access on Pickerel Lake and an adjacent gravel parking lot that can accommodate approximately 25 vehicles. As described in Section 6 of this EAW the parking lot location is proposed to change, and will accommodate parking for 25 vehicles. However, the canoe access point will remain in its current location. Increased use of the park area may lead to more canoe usage on Pickerel Lake.

There is a MnDNR designated public access located in the Park that serves to provide boating access to the Mississippi River. The existing parking lot at the MnDNR boat launch currently accommodates 48 boat trailer parking stalls. Currently the DNR agreement with the City requires maintaining all boat trailer parking spaces. Any reduction in boat trailer parking would need to be approved by the MnDNR. The future activity identified in the park master plan proposes reconfiguring the lot to maintain 24 existing boat trailer parking stalls and reconfigured to redesign the remaining 24 existing boat trailer parking stalls into 75 standard car/truck parking stalls. Reductions in available parking would have the potential to decrease the number of watercraft on this section of the Mississippi River during peak usage days. Currently, the MnDNR boat launch parking lot is under-utilized with boat trailer parking.

16. Erosion and Sedimentation

Give the acreage to be graded or excavated and the cubic yards of soil to be moved: 28.1 acres; 100,000 cubic yards.

Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

The EAW guidelines describe steep slopes as slopes of 12 percent or more. According to GIS metadata information available from the National Cooperative Soil Survey (NCSS) database, published in 2006, the eastern property line of the park contains steep slopes. In addition, steep slopes exist along the edge of the Mississippi River where changes in water elevation have occurred. Steep slope areas are shown on Figure 5.2. However, the steep slopes adjacent to the River are not described on the soil survey as steep. Neither of the areas containing steep slopes is proposed to be disturbed.

The steep slopes that occur along the eastern property line are located along the bluff line and include soils from the Etter-Brodale complex in Dakota County (south half of the park) and soils from the Dorerton-Rock outcrop complex in Ramsey County (north half of the park). The Etter-Brodale complex (Dakota County) contains soils that are moderately deep to deep and well drained to excessively drained in upland areas, and permeable to moderately rapidly permeable. The Dorerton-Rock outcrop complex (Ramsey County) contains soils that are moderately to moderately rapidly permeable. In addition, the complex is generally comprised of 50 – 75% Dorerton soils and 15 – 20% rock outcroppings.

Erodible soils are briefly discussed in the Report – Lilydale Regional Park Natural Resources Management Plan prepared for City of Saint Paul, Department of Parks and Recreation by Bonestroo in May 2009. The report describes the location of several small ravines along the bluff line that exhibit varying degrees of erosion, and the resulting deposition downhill. In addition, the report recommended steps for evaluating the eroded slopes and prioritizing them for stabilization.

This project will include excavation for the installation of roads, parking lots, trails, bridges, utility pipes, light-duty buildings, stormwater management practices, and other structures. Work will take place in wetlands, woodland areas, open space areas, and within existing roads or trails. To complete this work, it will be necessary to remove existing ground cover. By doing so, the potential for erosion and sedimentation exists. A general stormwater permit for construction activity (NPDES) as administered by the Minnesota Pollution Control Agency (MPCA) will be required. In addition, review by the Technical Evaluation Panel (TEP) for wetland impacts, and the City of Saint Paul for the River and Corridor Standards and Criteria will need to take place. To fulfill permit requirements, an erosion and sediment control plan will be prepared that implements controls in accordance with the NPDES permit, TEP review, and City requirements. This plan must include temporary and permanent erosion and sediment control measures including Best Management Practices (BMPs) that include standard specifications, details, and special provisions as outlined in the NPDES permit requirements and City of Saint Paul sustainability requirements. The construction of permanent stormwater management BMPs as well as the erosion and sediment control plan will be included in the project's Stormwater Pollution Prevention Plan (SWPPP).

Permanent erosion and sediment control measures may consist of establishing vegetation on all exposed soils in accordance with the NPDES Permit and as outlined in the SWPPP. Construction BMPs will minimize erosion potential during construction. Drainage structure outfalls would be designed to include outlet stabilization to minimize potential erosion and turbidity. Natural drainage ways including existing or proposed ditches as well as vegetated filter strips such as dense forests or prairies grass will aid in permanent erosion and sediment control as well as stormwater management.

The site will be controlled with perimeter silt fence at a two-foot offset from the proposed construction limits. All construction areas will be entirely controlled. Temporary sedimentation basins are proposed at the marina stockpile site as well as surrounding the Lilydale Park Dump Site. Additional silt fence and hay bale protection will be placed at key locations where existing drainage leaves the construction limits. All haul routes, staging areas, and construction sites will have rock construction entrances.

17. Water Quality: Surface Water Runoff

a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any stormwater pollution prevention plans.

The proposed park improvements are comprised of two different types of infrastructure that require different treatment standards. The roadway and trail are considered to be linear projects and are required to meet the MPCA'S NPDES permit requirements. The building sites, trailhead and two parking areas are considered to be site plans and, must meet NPDES permit requirements, City rate and sustainably standards. The project is also located in the Lower Mississippi Watershed Management Organization (LMWMO). However, the LMWMO does not at this time have any standards in effect. The Pickerel Clearing and Fossil Grounds are considered to be one site for the purposes of meeting regulatory requirements.

Soil-disturbing activities will include but are not limited to: demolition of the existing pavements and other site features required to complete the work, installing erosion control devices, building construction, preparing the subgrade for the parking lots, roadway and trails, trenching and placement of underground utilities, constructing stormwater features and installing paving materials. Final stabilization of the vegetated areas will include landscaping and seeding of all disturbed areas once the majority of construction activities are complete.

The structural and non-structural controls provide mitigation of increased developed runoff by providing water quality, rate control and volume control to the maximum extent practical. The project uses storm basins and non-structural controls (discharging runoff to vegetated areas) to treat the runoff as efficiently as possible as it relates to the site grades and geology. The project's planning and design process continually included consideration of the stormwater impacts in order to ensure they are minimized.

A summary of the pre and post development surface type areas are in the following summary table:

New Impervious Surface Summary		
Pre Development Area (acres)	Post Development Area (acres)	Increase from Pre Development (acres)
ROADWAY		
8.54	10.14	1.60
SITE		
0.00	1.73	1.73
TOTAL		
8.54	11.87	3.33

Note: The Table New Impervious Surface Summary was extracted from LHB's Drainage Report for proposed Roadway and Trail Improvements in Lilydale Regional Park dated May 15, 2012. Table references existing pervious and impervious areas within construction limits for roadway and trail improvements. Refer to Figure 5.3 for limits of construction.

Stormwater Management

A. Pre-Construction Conditions

The existing site has a long history of development. However, because of repeated flooding the site has been deemed unsuitable for continual human occupation and is currently used as park land. The park is comprised of dense vegetative cover consisting of mostly large mature trees with areas of grasslands. There are remnants of the past developed use and infrastructure used for the park, including areas of bituminous, gravel parking areas, paved roadways and paved or gravel trails.

The site is drained mostly by overland flow to the Mississippi River or Pickerel Lake. Some culverts and storm sewer systems are used to allow drainage to cross the road or trail. There is currently no treatment of stormwater runoff anywhere on site.

B. Post-Construction Conditions

The proposed stormwater collection, treatment and control systems proposed will address all of the stormwater runoff requirements for the project site. A post-development stormwater site drainage plan is included in the Appendix of this report.

1. Post-Construction Roadway and Trail Description

The stormwater runoff for the trails and roadway will be treated to NPDES standards. The proposed roadway and trails add about 1.60 acres of new impervious surface to the project site, and treatment for the new impervious will be provided in the form of infiltration ponds. The infiltration ponds will be comprised of three constructed storm basins and a number of natural low spots. Stormwater not treated directly will drain across dense forests or prairie grass, which will act as a vegetated filter strip to remove a large percent of the sediment before reaching the receiving water. The roadway alignment and profile were designed to facilitate drainage and to save trees. The trails will be constructed approximate 18" above the natural ground elevation and will be graded to drain to the surrounding densely vegetated landscape. The use of conveyance systems, for both the trail and roadway have been avoided to minimize impacts to mature trees. However, ditching has been used in areas draining to treatment devices and crossing culverts will be provided at low points to prevent the impoundment of water.

2. Post-Construction Pickerel Clearing and Fossil Grounds Site Description

The Pickerel Clearing and Fossil Grounds park improvement sites require different standards than the road and trail portions of the project. The sites fall under the City of St. Paul's sustainable and rate control requirements, as well as NPDES treatment standards. The project is also located in the Lower Mississippi Watershed Management Organization (LMWMO). However, the LMWMO does not at this time have any standards in effect. The Pickerel Clearing and Fossil Grounds are considered to be one site for the purposes of meeting regulatory requirements.

The Fossil Grounds site is divided into two subcatchments. The first subcatchment is comprised of the entire proposed impervious surface except the northern entrance drive. The runoff drains to the south into a proposed storm basin to the south of the parking area. The other subcatchment cannot feasibly be directed to the basin and drains to a proposed vegetated ditch used for roadway and other off-site drainage.

The Pickerel Clearing site is divided into two subcatchments. The majority of the proposed impervious surface drains to the north into a series of ditches, low points and culverts until it is retained and infiltrated into natural low points to the northeast of the proposed site. The remaining impervious area drains toward Pickerel Lake, which cannot feasibly be retained in a basin or conveyed due to contaminated soils, so it will be routed across dense prairie vegetation before entering Pickerel Lake.

3. Quality Treatment & Peak Discharge Rate Control

Stormwater treatment will provide water quality mitigation through infiltration and filtration of the runoff in constructed and natural storage facilities. During rain events runoff will enter the storage facility through vegetated overland flow that will filter the runoff before entering the storm basins. The storm basins will not hold standing water on a daily basis, but will temporary pond after rain events. An overflow is provided to allow runoff to discharge during large storm events before overflowing the roadway or trail. The storm basins are designed according to the Minnesota Pollution Control Agency (MPCA) Stormwater Manual and provides treatment in excess of the first 1.0 inch of runoff from the project's new impervious surfaces. The storm basins will control the post developed rates to City standards.

4. Volume Control (Infiltration)

The proposed stormwater treatment facilities provide runoff volume reduction for small frequent storm events. The project geotechnical report describes the soils as silty sand, USCS soil classification of SM. These soils have an assumed infiltration rate of 0.60 inches per hour per MPCA. Additionally, no bedrock was encountered in any of the borings and groundwater levels would not inhibit infiltration.

The proposed project employs qualitative BMPs to minimize the runoff volume increase. Those BMPs include minimization of impervious surfaces, vegetation in the storm basins, discharging runoff to a vegetated swale and vegetation restoration in disturbed areas.

C. Stormwater Management Summary

The proposed site manages stormwater for water quality and peak rate control. The following table summarizes the total site runoff rate and volume for the pre and post development conditions.

1. Total Site Runoff Summary Tables:

Existing Site Rate (CFS)			
	2-YR	10-YR	100-YR
Pickerel Clearing	1.16	10.26	26.52
Fossil Grounds	0.12	0.85	2.18
Total	1.28	11.11	28.70
Proposed Site Rate (CFS)			
	2-YR	10-YR	100-YR
Pickerel Clearing Bypass (7s)	1.16	4.52	10.37
Fossil Grounds Bypass (8s)	0.09	0.32	0.73
Pond 5	0.00	0.00	0.00
Pond 6	0.34	1.66	2.63
Total	1.59	6.50	13.73

NPDES Water Quality Volume (1" over the New Impervious)	
	CF
Required	12,088
Provided (Volume below Outlet)	71,587

b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

The project site is in the Mississippi River watershed. The project is bordered by the Mississippi River to the north and west and Pickerel Lake to the south and east. The majority of the site and Pickerel Lake are within the 100-yr floodway of the Mississippi River. The Mississippi River is classified as an Impaired Water and requires additional BMPs as defined by the MPCA.

1. Special and Impaired Waters Requirements

The additional project specific requirements for discharge from the site to the Mississippi River are:

C1: All exposed soil areas shall be stabilized within 7 days.

C2: Water quality volume shall be 1" over the new impervious. Where site conditions allow, 1/2" shall be infiltrated.

The proposed treatment ponds will mitigate the additional runoff from new impervious areas.

Runoff rates for areas proposed to be disturbed are maintained or reduced under the post development conditions minimizing impact on the receiving waters.

18. Water Quality: Wastewaters

a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

The proposed picnic shelter will have restrooms located nearby. The restroom building will consist of two double stall restrooms and one storage/mechanical room. The restroom will be connected to proposed City sanitary sewer. According to the master plan amendment, it is anticipated 1,325 patrons will visit the park during the day on a peak summer weekend when all master plan elements are implemented.

The restrooms of the picnic shelter will result in a peak discharge rate of approximately 35gpm. However, the sanitary sewer force main will have a maximum flow rate of 70gpm.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies (identifying any impaired waters), and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

Connections made to the City sanitary sewer will direct water to the Pig's Eye Wastewater Treatment Facility. Major downstream receiving water bodies include Pig's Eye Lake and the Mississippi River.

c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

The treatment facility accepting wastewater for treatment is Pig's Eye Wastewater Treatment Facility.

19. Geologic Hazards and Soil Conditions

a. Approximate depth (in feet) to ground water: 0 feet minimum, 5 feet average; to bedrock: 100 feet minimum, 100 feet average. Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

19.1. Geology/Hydrogeology

The Prairie du Chien Group of dolomite with interbedded sandstone and shale is the uppermost bedrock formation underlying the subject property. The Ordovician-aged Prairie du Chien Group is underlain by Jordan Sandstone. The bedrock surface in the area of the subject property is located at an elevation of approximately 600 feet (100 feet below the ground surface). The bedrock forms a valley paralleling the Mississippi River that trends to the northeast-southwest. The area of the subject property is in the low point of the bedrock valley.

The depth to ground water at the subject property is estimated at 5 to 10 feet below the ground surface based on field observations. The uppermost bedrock aquifer is the Prairie du Chien-Jordan Aquifer (from Geologic Map of the Minneapolis-St. Paul Urban Area, Minnesota, Miscellaneous Map Series, M-57, Plates 1 and 2, University of Minnesota, Minnesota Geologic Survey, Bruce A. Bloomgren, 1985.).

There are no known naturally forming sinkholes, shallow limestone formations or karst conditions.

b. Describe the soils on the site, giving NRCS (SCS) classifications, if known. Discuss soil texture and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

19.2. Soils

Native surficial soils in the general area are silt loams from the Chaska series. The Chaska silt loam is characterized by poor drained soils with low hydraulic conductivity.

Several feet of fill overlie contaminated sites described in Section 9.

20. Solid Wastes, Hazardous Wastes, Storage Tanks

a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

As described previously, the City of Saint Paul is currently conducting an additional investigation and preparing a RAP for submittal and approval by the MPCA. The RAP will assist in conducting removal actions, and will be implemented during the construction of the road realignment and walking/bicycle trail construction activities. Existing roadway and stockpiled material will be recycled onsite by using as capping material.

b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

Toxic or hazardous materials would not be present at the construction site, with the exception of fuels and lubricants needed for construction equipment. Appropriate safety measures would be followed during construction to avoid spills. Leaks, spills or other releases would be responded to in accordance with MPCA spill, containment, and remedial action procedures.

c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

According to previously prepared environmental studies, no above ground or underground storage tanks currently exist at the Lilydale Regional Park property. The Phase I EA prepared by Delta discussed the review of a site plan depicting structures and utilities in the Lilydale area prior to demolition. According to that map, no wells or cesspools were depicted on the subject property. Though, a survey of the county well index indicates several wells are located in or near the park, as described in Section 13.

No permanent above or belowground storage tanks are included as part of the scope of the project. Temporary storage tanks may be located in the project area for use during construction. These temporary tanks may be used for materials such as petroleum products for the construction vehicles. Appropriate safety measures will be in place during construction to avoid spills. Spills, leaks, or other discharges will be responded to in accordance with MPCA spill, containment, and remedial action procedures.

21. Traffic

*Parking spaces added: 77 spaces
Existing spaces (if project involves expansion): 120 spaces
Estimated total average daily traffic generated: 2,200 daily trips
Estimated maximum peak hour traffic generated and time of occurrence: 237 peak hour trips
Indicate source of trip generation rates used in the estimates: Professional traffic engineering analysis including the use of City of Saint Paul Public Works April 2010 and 2012 traffic counts.*

If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Using the format and procedures described in the Minnesota Department of Transportation's Traffic Impact Study Guidance (available at: <http://www.oim.dot.state.mn.us/access/pdfs/Chapter%205.pdf>) or a similar local guidance, provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system.

Proposed Compared to Existing Parking

As part of the Lilydale Regional Park Master Plan, roadways and parking lots will either be reconstructed or created as new infrastructure. Lilydale Road will be constructed as a two lane rural road through the park, maintaining travel lane widths of 10-feet with four-foot wide paved trail/shoulders and one-foot wide gravel shoulders.

For the phase 1 parking development, the existing parking will be reduced from 120 stalls to 116 stalls. Using professional traffic engineering judgment, it is expected the parking stalls will turn over twice on a typical weekday with one vehicle entering or exiting during the peak traffic hour.

Total parking development includes redesign of the existing DNR boat launch parking lot (75 vehicular parking stalls and 24 boat parking stalls) as well as additional parking stalls (30) for the Pickerel Clearing parking lot. This will result in the existing parking expanded from 120 to 197 stalls (77 additional stalls). Using professional traffic engineering judgment, it is expected the parking stalls will turn over twice on a typical weekday with one vehicle entering or exiting during the peak traffic hour. The additional parking stalls are expected to generate approximately 308 daily trips (154 vehicles entering and 154 vehicles exiting the park) and 77 trips during the peak hour.

Regional Impacts

The City of Saint Paul Public Works conducted traffic counts for Lilydale Road in April, 2010 and again in April, 2012. As determined by those traffic counts, approximately 1,900 vehicles per day use the existing two lane road for a typical weekday with a peak hour trip generation of approximately 160 vehicles. According to the *2010 Highway Capacity Manual*, a two lane paved road classified as similar to Lilydale Road has a daily traffic capacity of 8,000 to 10,000 vehicles per day. With approximately 308 vehicles per day, the total parking development added to Lilydale Road from the expanded parking, will result in approximately 2,200 vehicles per day on the road after full reconstruction. Lilydale Road will operate with daily volumes that are approximately one-quarter of its capacity after the road and parking lot reconstruction has taken place.

22. Vehicle-related Air Emissions

Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts.

This area does not currently suffer traffic congestion, and it is anticipated the improvements will not significantly increase traffic volumes. Therefore, no significant net increase in air emissions is expected. However, construction equipment will generate some air emissions typical of rural agricultural activities.

23. Stationary Source Air Emissions.

Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult EAW Guidelines for a listing) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

No stationary air emissions will be generated.

24. Odors, Noise and Dust

Will the project generate odors, noise or dust during construction or during operation? Yes No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

24.1. Construction Odors

The proposed project would not generate substantial odors during construction. Potential odors would include exhaust from diesel engines.

24.2. Construction Noise

The construction activities associated with implementation of the proposed project will result in increased noise levels relative to existing conditions. These impacts will primarily be associated with construction equipment and pile driving.

The following table (Table 24.1) shows peak noise levels monitored at 50 feet from various types of construction equipment. This equipment is primarily associated with site grading/site preparation, which is generally the roadway construction phase associated with the greatest noise levels.

Table 24.1 Typical Construction Equipment Noise Levels at 50 feet

Equipment Description	Spec Maximum Noise Level (dBA)	Actual Measured Noise Level (dBA)	Number of Actual Data Samples (Count)
Backhoe	80	78	372
Compactor (Ground)	80	83	57
Crane	85	81	405
Dozers	85	82	55
Dump Truck	84	76	31
Excavator	85	81	170
Front End Loader	80	79	96
Grader	85	N/A	0
Paver	85	77	9
Impact Pile Driver	95	101	11
Roller	85	80	16
Scraper	85	84	12
Source: Federal Highway Administration Construction Noise Handbook			

Elevated noise levels are, to a degree, unavoidable for this type of project. However, the City of St. Paul will require that construction equipment be properly muffled and in proper working order to reduce noise levels. It is the practice to require contractors to comply with applicable local noise restrictions and ordinances to the extent that is reasonable. In addition, as noted on Plan Sheet 10.01 as prepared by LHB, all trucks and machinery traveling along Lilydale Road need to have speed and noise restrictions in place w/properly muffled exhaust systems and no use of jake brakes when working within sensitive areas such as the existing Bald Eagle nest. Advanced notice will be provided to affected communities of any planned abnormally loud construction activities. Construction will be limited to daytime hours as much as possible. This project is expected to start in the late summer or fall of 2012.

Any associated high-impact equipment noise, such as pile driving, pavement sawing, or jack hammering, will be unavoidable with construction of the proposed project. Pile driving noise is associated with any bridge construction and sheet piling necessary for retaining wall construction. While pile-driving equipment results in the highest peak noise level, as shown in Table 24.1, it is limited to the activities noted above (e.g., bridge construction). The use of pile drivers will be prohibited during nighttime hours.

24.3. Construction Dust

Dust generated during the excavation will be suppressed by wetting, as necessary, to achieve “no visible emissions”.

25. Nearby Resources

Are any of the following resources on or in proximity to the site?

Archaeological, historical or architectural resources? Yes No

Prime or unique farmlands or land within an agricultural preserve? Yes No

Designated parks, recreation areas or trails? Yes No

Scenic views and vistas? Yes No

Other unique resources? Yes No

If yes, describe the resource and identify any project-related impacts on the resource. Describe any measures to minimize or avoid adverse impacts.

25.1. Archaeological Resources

Archaeological records with the State Historic Preservation Office (SHPO) reported burial mounds sites 21DK19 and 21DK20 in the park area and 10 historical, urban archaeology sites recorded within one mile (Table 25.1). The archaeology summary is from the 106 Group Ltd. Report - High Bridge Pipeline Project Phase I Archaeological Survey and Geomorphological Investigation, November 2005.

The 21DK19 burial site is a linear formation along the bluff top near the south end of Pickerel Lake with 11 mounds. The site 21DK20 burial site comprises 22 mounds, described in the field notes from Roberts and Roberts in 1981 as “circular except one with an extension to the northwest”. These mounds have not been evaluated recently to assess their preservation condition.

Field investigations undertaken in 2005 in the Area of Potential Effect (APE) delineated for assessment of the High Bridge pipeline project showed paleosols (1-2.5 meters buried, well-drained soil horizons), an indicator of pre-contact cultural resources. Deep trenching and shovel tests within the APE in the High Bridge pipeline construction area only showed no evidence of intact pre-contact sites.

Table 25.1 Archeological Records Within One Mile of the Park.

Site No.	Site Name	T	R	S	¼ Section	Description
21DK19	Bluff Mounds	28	23	13, 14	SW ¼ of SW ¼ Sec 13; SE ¼ of SE ¼ Sec 14	Earthwork - mounds
21DK20	Burial Site	28	23	23	SE ¼ of NW ¼ Sec 23	Earthwork - mounds
21RA19	Ramsey House	28	22	6	SW-SW-NW	Structural ruin; artifact scatter
21RA21	James J. Hill House	28	23	1	SW-NE-NE	Structural ruin; artifact scatter
21RA32	Washington St. Residential District	28	22	6	SE-SE-NW	Artifact scatter; structural ruin
21RA37	Osborne Foundry/Old Brewery	28	22	6	SW-SE-NW	Artifact scatter; structural ruin
21RA45	Harriet Island	28	22	6	SE-NE-SW NE-SE-SW SW-NW-SE NW-SW-SE	Artifact scatter
21RA47	Armstrong House Relocation 7	28	22	6	NW-NE-SW	Structural ruin ; artifact scatter
21RA49	Dakotah/Washington House Hotel	28	22	6	NW-NE-NW	Structural ruin ; artifact scatter
21RA50	Schnelle	28	22	6	SE-NW-NW	Artifact scatter; well feature
21RAr	Fountain Cave	28	23	12	SE-NW-SW	Historic documentation
21RA _s	North Mississippi Brewery Caves	28	23	11	SW-SE-SE	Historic documentation

25.2. Prime or Unique Farmland or Designated Agricultural Areas

No agricultural lands are part of the project area. The project will not cause adverse impact to agricultural land or operations. No federal form AD-1006, pursuant to disclosure of impacts under the Farmland Protection Policy Act of 1981, was prepared for the project.

25.3. Designated Parks, Trails, Recreation Areas

The entirety of the project area is publicly owned parkland. Ownership and trails were described previously in this EAW. The proposed project constitutes implementation of elements of the Lilydale Regional Park Amended Master Plan 2010. No federally owned land is affected, and the project does not involve federal Section 4(f) and Section 6(f) regulations.

All recreational activities in the existing park are maintained and operated by the City of St. Paul.

25.4 Scenic Views and Vistas

The park is within the bottomlands of the Mississippi River and adjacent to the steep bluffs rising high above the river. The Bruce Vento's Overlook is located at the top of the bluffs in the City of Lilydale. No impacts to scenic views or vistas are planned as part of the project.

25.5. Other Unique Resources

The project proposes impacts to wetlands that may need to have a Phase I Cultural Resources Survey of the proposed project area. The Area of Potential Effect for the Project will include the work limits from the area around the Fossil Grounds Trailhead parking lot.

26. Visual Impacts

Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? If yes, explain.

Yes No

27. Compatibility with Plans and Land Use Regulations

Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency? If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

Yes No.

The park is currently zoned R-4 (One-Family Residential District). See Panel 21 of the City of Saint Paul Zoning Districts Map. In addition, the park also lies in the RC-1 Floodway District (River Corridor Floodway Overlay District) and the RC-2 Flood Fringe District (River Corridor Flood Fringe District). Development within the RC-1 Floodway District and the RC-2 Flood Fringe District will require meeting the standard for a Conditional Use Permit of that District as outlined in the municipal Code of Ordinances.

According to a City of Saint Paul Zoning Committee Staff Report addressing a Conditional Use Permit Application received on July 28, 2010 and discussed at a public hearing on August 19, 2010, the findings suggest the relationship of the proposed use (Master Plan for improvements to Lilydale Regional Park) to the comprehensive plan and floodplain management for the City are consistent with one another.

Two major strategies of the Parks and Recreation Plan are to *Promote Active Lifestyles* and *Promote a Vital Environment*. The placement of fill within the park will allow planned development of improved facilities for active recreation. It will also result in a benefit to the environment by removing contaminated soils and providing for establishment of native plants as well as resulting in no net fill within the floodway.

28. Impact on Infrastructure and Public Services

*Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project?
If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see EAW Guidelines for details.)*

Yes No

Existing and new roadways, trails, and utilities will be reconstructed or constructed as part of this project.

Approximately 8,900 linear feet (1.69 miles) of roadway construction will include:

- 5,290 linear feet (1.00 mile) of existing roadway reconstruction
- 1,866 linear feet (0.35 mile) of reconstructed 12' shared-use trail converted to roadway
- 1,744 linear feet (0.33 mile) of new roadway construction through existing parkland

In addition, a 38-foot single span and 38-foot wide timber slab bridge with bituminous wearing course will be constructed. Furthermore, the roadway construction will include new sanitary sewer, buried electric cable, and water main for the new public restrooms and park shelter. As shown on Road Plan & Profile Plan Sheet 8.08, prepared by LHB Architects for the City of Saint Paul, the sanitary sewer is proposed to be a two-inch forcemain service connecting to the existing ISMH/1 sanitary sewer manhole at the intersection of Dr. Justus O'Hage Boulevard and Lilydale Road near the south end of Harriet Island. In addition, the water main is proposed to be a two-inch service connecting to an existing water valve adjacent to the existing ISMH/1 sanitary sewer manhole. The sanitary sewer forcemain and water main service terminate at the picnic shelter for future connections and sanitary sewer lift station by others. These utilities are to be designed per standards as set forth by the MPCA.

Approximately 11,433 linear feet (2.17 miles) of 12-foot wide bituminous trail construction will include:

- 2,564 linear feet (0.49 mile) of reclaimed road
- 525 linear feet (0.099 mile) of reclaimed parking or graded areas
- 1,456 linear feet (0.28 mile) over the remediated dump site
- 1,223 linear feet (0.23 mile) of reconstructed trail
- 5,683 linear feet (1.08 mile) of new trail construction

29. Cumulative Potential Effects

Minnesota Rule part 4410.1700, subpart 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement.

Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative potential effects. (Such future projects would be those that are actually planned or for which a basis of expectation has been laid.)

Describe the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects (or discuss each cumulative potential effect under appropriate item(s) elsewhere on this form).

Potential cumulative effects could arise from additions to ongoing or anticipated activities within or near the Mississippi River corridor in the Twin Cities region. Within this densely populated region ongoing activities include groundwater appropriation, stormwater discharges which lead to exceedances of federal or state water quality standards, and loss of sensitive resources and wetlands. The proposed project does not require groundwater appropriation or significant stormwater discharges. Sensitive resources were identified and no losses are expected from the project, thus adding cumulatively to losses in the river corridor. Minimal wetland impacts are identified. No cumulative effects are identified for the proposed project.

30. Other Potential Environmental Impacts

If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

No additional environmental effects are foreseen for the proposed project.

31. Summary of Issues

Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.

List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

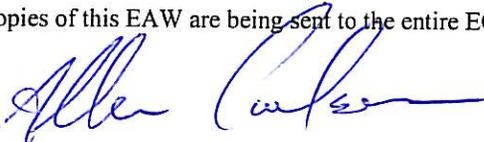
Wetland impacts are identified for the proposed project. They are limited to the reconstruction of the bridge crossing wetlands as described in this EAW. Various alternatives and the measures to avoid, minimize, and compensate for impacts are described in the wetland permit application under review by the TEP. A meeting April 26, 2012 of the TEP did not identify that proposed impacts and mitigation would not be feasible.

RGU CERTIFICATION. *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature



Date

6-9-12

Title



The staff of the Environmental Quality Board at the Minnesota Department of Administration, Office of Geographic and Demographic Analysis prepared Environmental Assessment Worksheet. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-201-2492, or <http://www.eqb.state.mn.us>

References

- American Engineering Testing, Inc. 2011. Assessment of Existing Cover over Lilydale Dump Area. June 2011.
- Bonestroo. 2009. Lilydale Regional Park Natural Resources Management Plan. Prepared for the City of Saint Paul. May, 2009.
- Bonestroo. 2010. Response Action Plan and Construction Contingency Plan - Lilydale Park Dump Site and Lilydale Demolition Site. Prepared for the City of Saint Paul. January 29, 2010.
- Bonestroo. 2009. Wetland Delineation Report – Lilydale Regional Park. Prepared for the City of Saint Paul. November 10, 2009.
- Braun Engineering Testing, Inc. 1988. Preliminary Subsurface Environmental Assessment, Lilydale Regional Park Area South of the Proposed Levee. March 7, 1988.
- City of Saint Paul. 1973. Environmental Intrusions Map, Lilydale. February 1973
- Delta Environmental Consultants, Inc. 2004. Environmental Assessment - Phase I and Phase II Reports. Prepared for the Minnesota Pollution Control Agency. June 29 and September 23, 2004.
- Legend Technical Services, Inc. 2011. Work Order Number 1102410 for Lilydale. Results of Analyses for Samples Received on June 3, 2011. Prepared for Liesch associates, Inc. June 16, 2011.
- The 106 Group Ltd. 2005. High Bridge Pipeline Project Phase I Archaeological Survey and Geomorphological Investigation. November 2005.